

Sunwater Ltd: Woleebee Creek to Glebe Weir Pipeline Project (EPBC 2011/6181) Offset Management Plan



earthtrade

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Our 20202339C

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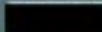
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Declaration

I declare that to the best of my knowledge, all the information contained in, or accompanying this document is complete, current and correct. I am duly authorised to sign this declaration on behalf of the proponent/approval holder. I am aware that:

- a. *section 490 of the Environment Protection and Biodiversity Conservation Act 1999 (Cwth) (EPBC Act) makes it an offence for an approval holder to provide information in response to an approval condition where the person is reckless as to whether the information is false or misleading.*
- b. *section 491 of the EPBC Act makes it an offence for a person to provide information or documents to specified persons who are known by the person to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cwth) where the person knows the information or document is false or misleading.*
- c. *the above offences are punishable on conviction by imprisonment, a fine or both.*

Signed:

Full name (please print):

Organisation: Sunwater Limited

ABN: 17 020 276 523

EPBC Referral Number: EPBC 2011/6181

EPBC Offset Management Plan

Date: / /2023

Executive summary

The Woleebee Creek to Glebe Weir Pipeline Project (the **Project**) involves the construction and operation of a pipeline to transport up to 113 ML/day of treated coal seam gas (**CSG**) water from Woleebee Creek to the Dawson River at Glebe Weir in southern Queensland.

The pipeline is approximately 119 km in length and has a construction easement 30 m wide, creating a construction area of circa 435 hectares (**ha**).

The pipeline traverses through the Western Downs and Banana Regional Council areas, crossing private farming land, road reserves and mining and petroleum tenures, as well as creeks and roads owned by the State or local government.

The project was declared a “controlled action” under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) by the Federal Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) on 22 December 2011. The controlling provisions are under Section 18 and 18A, potential impacts on Listed Threatened Species and Communities. The offset was also required by condition 6 of the EPBC Act Referral 2011/6181, dated 27 September 2012.

Field surveys of both the impact and offset sites were undertaken separately. Comprehensive field surveys were undertaken on the impact area by SKM in 2013. The vegetation of the impact site was found to be a mix of remnant and non-remnant vegetation, a small portion of which was found to be RE 11.3.3 and also the Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions Threatened Ecological Community (**TEC**).

The offset site survey was undertaken by Agri & Environmental Solutions Pty Ltd (**ARE**) in November 2019. The surveys were undertaken as per the Guide to determining terrestrial habitat quality, A toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy (version 1.3, Department of Environment and Science (**DES**), 2020).¹

The vegetation within the Woleebee Creek Offset Area consists of regrowth regional ecosystems associated with RE 11.3.3 which is listed as a constituent regional ecosystem (**RE**) that is part of the Coolibah–Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Regions TEC.²

An overview of the terrestrial ecology of the impact areas and the resultant offset requirements are summarised in *Table 1*. The offset meets the requirements of the EPBC Act environmental offsets policy (**EOP**)³ (DSEWPAC 2012) being 100% direct offset.

¹ https://environment.des.qld.gov.au/__data/assets/pdf_file/0017/102833/habitat-quality-assessment-guide-v1-3.pdf

² <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/66-listing-advice.pdf>

³ https://www.environment.gov.au/system/files/resources/12630bb4-2c10-4c8e-815f-2d7862bf87e7/files/offsets-policy_2.pdf

Table 1: Summarised project impacts versus proposed offset area values

Protected matter and Habitat Definition (approval conditions)	EPBC status	Impact area (ha)	Habitat quality score (/10)	Impact quantum (ha)	Offset area (ha)	Habitat quality Start score	Quality score without offset	Quality score with offset	Offset quantum and % of liability provided
Coolibah threatened ecological community Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Vulnerable	1.38 ⁴	7	0.97	10	3	1	7	475.94%

This Offset Management Plan (OMP) demonstrates that the proposed offset site on Stoney Creek meets the principles of the EPBC Act EOP and is a suitable offset for approved impacts resulting from the Project.

⁴ Table 2.2, Woleebee Creek to Glebe Weir Pipeline, Vegetation Offset Strategy, Version 7 ,11 January 2013, SKM

**Part A: Woleebee Creek to
Glebe Weir Pipeline Project
Offset Management Plan
EPBC: 2011/6181**

1 Introduction

1.1 Project description

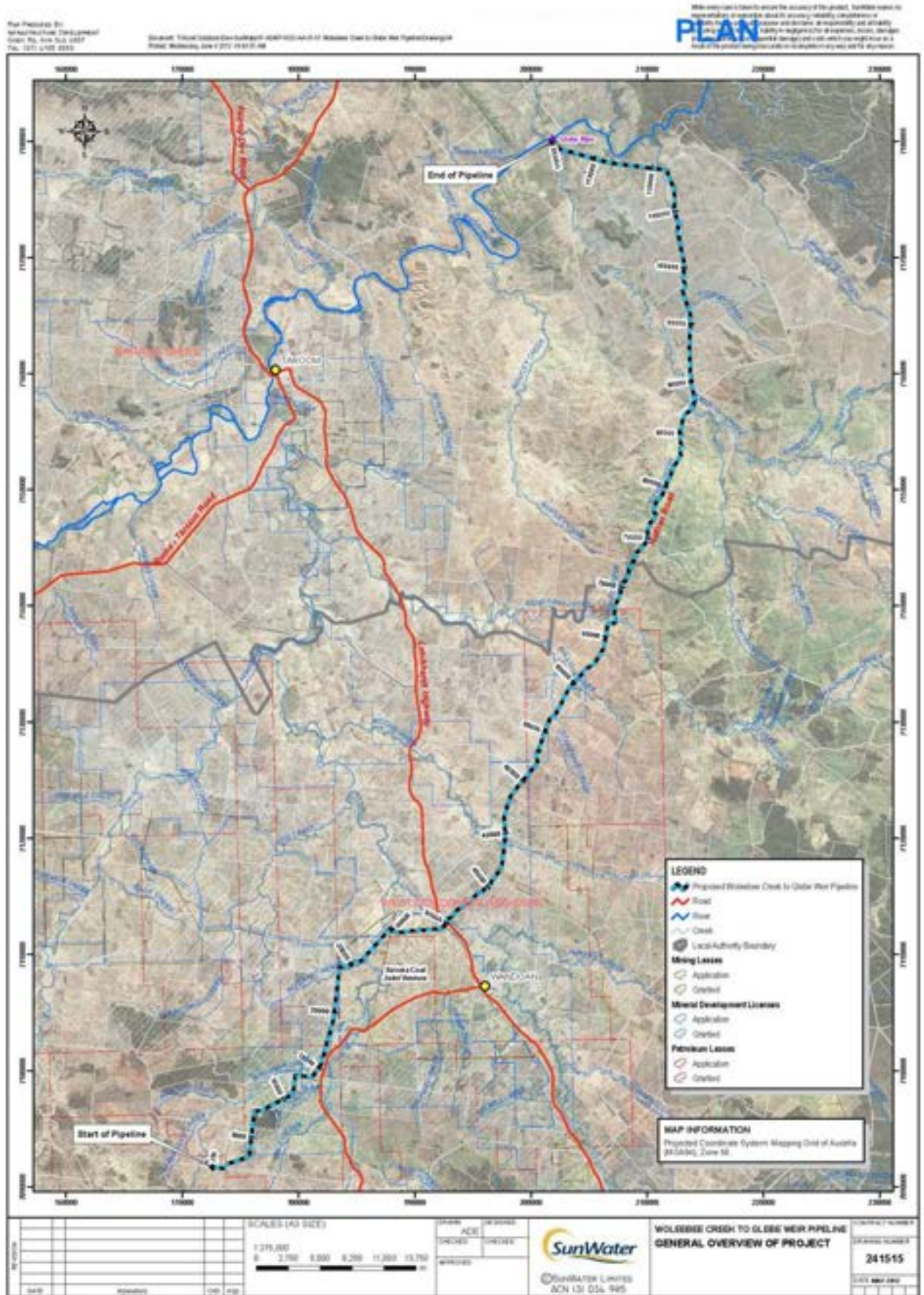
The Woleebee Creek to Glebe Weir Pipeline Project (the **Project**) involves the construction and operation of a pipeline to transport up to 113 ML/day of treated CSG water from Woleebee Creek to the Dawson River at Glebe Weir in southern Queensland (see *Figure 1*).

The pipeline is approximately 119 km in length and has a construction easement 30 m wide, creating a construction area of circa 435 ha.

The pipeline traverses through the Western Downs and Banana Regional Council areas, crossing private farming land, road reserves and mining and petroleum tenures, as well as creeks and roads owned by the State or local government.

The Project was declared a “controlled action” under the EPBC Act by the then Department of Sustainability, Environment, Water, Population and Communities (**DSEWPAC**) (now the Department of Agriculture, Water and Environment (**DAWE**)) on 22 December 2011. The controlling provisions are under Section 18 and 18A, potential impacts on Listed Threatened Species and Communities. The offset was also required by condition 6 of the EPBC Act Referral 2011/6181, dated 27 September 2012.

Figure 1: Project location



1.2 Purpose

This OMP has been specifically prepared to address the requirements of condition 6 of the EPBC Approval Conditions 2011/6181, as shown in *Table 2* below, which lists the requirements of the Project offset approval conditions in relation to matters of national environmental significance (MNES) and cross-references the section of this OMP where these are addressed.

Table 2: EPBC MNES offset approval conditions

Condition	OMP section or comment
6. The person taking the action must develop a Biodiversity Offset Strategy (BOS) to ensure better protection of EPBC Act listed threatened species and communities. The BOS must be submitted to and approved by the Minister prior to commencement of the action.	The BOS version 9 dated 19 March 2013 and this report fulfils this condition as detailed below
a) The BOS must be developed in accordance with the EPBC Act Environmental Offset Policy	The EPBC EOP requirements have been addressed in full in the sections detailed below
b) The BOS must include, but should not be limited to, the following:	
(i) Details of the acquisition and ongoing management of vegetation which meets or will meet the definition of the endangered ecological community "Brigalow (Acacia harpophylla) dominant and co-dominant"	N/A for this OMP as it has been offset previously
(ii) Details of the acquisition and ongoing management of vegetation that meets or will meet the definition of the endangered ecological community "Coolibah-Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Region"	<i>Section 5, Section 9</i>
(iii) Details of steps to be undertaken to legally secure the proposed offset areas and implement the BOS within 12 months of the commencement of the action	<i>Section 12</i> Note that this is a replacement area for the original offset that was damaged
(iv) The offset areas for each separate community must be contiguous (that is, the total cannot be comprised of a number of fragments, and must not be located within an existing mining lease or mining lease application areas; and	<ul style="list-style-type: none"> • <i>Section 5</i> • <i>Figures 3, 4 and 5</i> • <i>Appendix 1.2</i>
(v) Upon legally securing the offset area, the BOS must be updated with a textual description and map to clearly define the location and boundaries of the offset area. This must be accompanied with the offset attributes and a shapefile.	<ul style="list-style-type: none"> • <i>Section 5.2</i> • <i>Figure 5</i> • <i>Appendix 1.2</i>

1.3 Area for offset acquittal

Sunwater has identified and selected the property to offset the residual impacts to the Coolibah - Black Box Woodlands TEC. Within the offset property, the area known as 'Stoney Creek offset area 1' (the **offset area**), is the subject of this OMP, to acquit the Project's environmental offset obligations associated with EPBC Approval 2011/6181.

Consideration has also been given to future property planning and any potential future use for the property to avoid the potential for conflicting land use with the offset area.

1.4 Plan structure

This OMP is divided into 2 parts – **Part A** (Project Details and Impact Areas) and **Part B** (Offset Land Management Details).

Part A contains:

- Introduction to the Project (impact area) and purpose of the plan
- How the offsets address the EPBC EOP and relevant EPBC conservation advices and plans
- Impact area description
- An overview of the offset property
- Offset property information, including the landscape values
- Offset REs and habitat quality scoring (HQS).

Part B contains the Land Management plan, containing:

- Risk analysis
- Offset management measures
- Completion criteria and performance targets
- Monitoring and reporting.

2 EPBC Act Environmental Offsets Policy and framework

This section describes how the proposed offset meets the relevant requirements of the EPBC Act Environmental Offsets Policy (October 2012) (**EOP**), plans and guidelines.

2.1 Policy principles

The EPBC Act EOP sets out eight key overarching principles to determine the suitability of offsets. *Table 3* outlines each of the policy principles and how they have been considered in this OMP, including a reference to the relevant OMP section.

Table 3: EPBC Act Environmental Offset Policy principles

Policy principle	Project offsets
Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the protected matters.	The offset will deliver a conservation outcome by providing regrowth RE 11.3.3 that is part of the Coolibah Woodland TEC. The area will be managed to improve the vegetation condition of the TEC, and the Voluntary Declaration under the <i>Vegetation Management Act 1999</i> (QLD) (VMA) will ensure legal protection of the area. ⁵
Suitable offsets must be built around direct offsets but may include other compensatory measures.	100% of the Project's MNES offset obligations will be acquitted by the proposed direct land-based offsets.

⁵ See Schedule 3 for the application form for a declared area and the accompanying Declared Area Management Plan form. These forms replace the Voluntary Declarations originally supplied. Refer to <https://www.legislation.qld.gov.au/view/w/pdf/inforce/current/act-1999-090>

Policy principle	Project offsets
Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter.	The status of the impacted TEC has been taken into account by the offset assessment guide that has been used to calculate the offset area requirements. The Coolibah Woodland TEC is listed as vulnerable under the EPBC Act.
Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter.	The extent of the offset has been calculated using ecological reports ⁶⁷ that include both flora and fauna surveys, for both the impact and offset sites to inform inputs into the habitat quality spreadsheets and then the offset assessment guide. The inputs to the offset assessment guides for each of the impacted protected matters are discussed in <i>Section 6</i> and detailed in <i>Schedule 2</i> .
Suitable offsets must effectively account for and manage the risks of the offset not succeeding.	The risks associated with the offset have been assessed (<i>Table 7</i>). Risk mitigation measures and associated management actions have been listed in <i>Table 8</i> . In addition, the Confidence in the offset achieving the required outcome was addressed within the offset assessment guide.
Suitable offsets must be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs.	Vegetation clearing as a Native Forest Practice, or a Forest Practice, and/or grazing on the offset site is not currently prohibited by legal mechanisms at either the local, state or Australian government legislative level. The area is zoned rural and has been cleared for cattle grazing previously. Areas of the offset property have been subject to vegetation clearing ⁸ since the late 1940s as evidenced in the historical imagery provided in <i>Section 13</i> . The current unregulated vegetation will be secured via a Voluntary Declaration that has its head of power under the VMA. Refer <i>Section 12</i> for further detail.
Suitable offsets must be efficient, timely, transparent, scientifically robust and reasonable	The proposed offsets will be efficient and timely as the offset will be established and implementation commenced within 6 months of approval of this OMP. The offsets' scale and suitability are transparent, and the offsets are based on the terrestrial ecology reports prepared by suitably qualified ecologists for the impact and offset sites (<i>Appendix 1</i>); The offsets have been prepared using the EPBC Act Offset Assessment Guide inputs and calculators. Refer to <i>Section 6</i> for further detailed application of the Offset Assessment Guide.
Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	The offset will be protected from clearing and secured via a Voluntary Declaration that has its head of power under the VMA. Refer to <i>Section 12</i> for further detail. The offset site was surveyed during November 2019, providing the baseline vegetation condition assessment and these scores compared against the relevant biocondition benchmarks. ⁹ Habitat quality assessments were conducted in accordance with the <i>Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland</i> . Version 4.0 ¹⁰ which involved collecting spatial data, and conducting in situ vegetation surveys, assessing site condition and spatial context. These habitat assessment measurements will be conducted in accordance with this plan during its implementation phase. Monitoring and reporting are detailed in the Offset Area Management Measures outlined in <i>Table 8</i> , and the monitoring schedule and reporting schedule are shown in <i>Table 10</i> and <i>Table 11</i> .

⁶ Woleebee Creek to Glebe Weir Pipeline, Vegetation Offset Strategy, Version 7, SKM, 11 January 2013.

⁷ Offset assessment Offset Suitability Assessment, Foley Vale and Stoney Creek, ARE 2019

⁸ *Vegetation Management Act 1999*, Schedule dictionary

⁹ Benchmarks are quantitative values derived from data collected from field-based reference sites for each site condition attribute assessed in BioCondition.

¹⁰ Neldner, V. J., Wilson, B. A., Dillewaard, H. A., Ryan, T. S. and Butler, D. W. (2017). *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*. Version 4.0. Queensland Herbarium, Department of Environment and Science, Brisbane.

2.2 Addressing relevant EPBC plans and advice

The EOP states that an offset should address key priority actions for the impacted MNES in any approved recovery plans, threat abatement plans, conservation advice, ecological character description or approved Commonwealth Management Plan. *Table 4* summarises how this plan addresses the relevant Conservation Advices and Threat Abatement Plans, on the offset site.

Table 4: Conservation Advice and Threat Abatement Plans addressed in the OMP

Document	Key threats	Section addressed in document
<p><i>Conservation Advice for Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community</i> Dated 10 February 2011</p>	<p><i>Clearing and fragmentation</i></p> <p>The TEC occurs in alluvial plains in proximity to wetlands and watercourses that overflow regularly. Due to this geographical distribution, the TEC is often cleared for irrigated agriculture and grazing</p>	<p>Refer to <i>Table 8: Forestry and native vegetation</i> - clearing is not permitted under the plan.</p> <p>No forestry or timber harvesting activities will be undertaken during the period of the Voluntary Declaration.</p> <p>Forestry and native timber harvesting practices in the offset area is considered a potential threat to the quality of the vegetation community and habitat due to a reduction in cover and fragmentation of habitat.</p> <p>Note that this is recognised as a risk, however is considered a Force Majeure event and not within the control of the proponent or landholder.</p>
	<p><i>Changes to water flow and patterns</i></p> <p>The extraction of water from river systems can reduce the frequency and extent of overland flows. This can lead to a reduction in the water table and is usually associated with initial clearing for irrigated agriculture</p>	
	<p><i>Inappropriate grazing regimes</i></p> <p>Overgrazing reduces native pasture cover, prevents the recruitment process of the canopy species and encourages the invasion of weed species. This is often accompanied by the sowing of exotic pasture species</p>	<p>Refer to <i>Table 8: Grazing</i> – grazing is not permitted during the wet season; ground cover levels will be monitored and managed.</p> <p>Stock will be grazed in the offset areas for fuel reduction purposes during September to January, or until the wet season starts.</p>
	<p><i>Invasion by exotic species</i></p>	<p>Refer to <i>Table 8: Pest plants</i> – will be reduced to less than 10% of ground cover.</p> <p>Weed control will be undertaken throughout the offset areas and then periodically, as required, to treat the weeds at the optimum time in their life cycles. The practices will control and minimise the spread of existing weed species.</p>
	<p><i>Inappropriate fire regimes.</i></p> <p>Hot fires that impact vegetation community structure and increase the likelihood of weed invasion</p>	<p>Refer to <i>Table 8: Fire</i> – fire is not permitted in the offset area unless for fuel reduction purposes at no less than seven-year intervals and no more than 30% of the area in any year (this is restricted to the Eucalypt areas).</p>

3 Impact site description

The pipeline is approximately 119km in length and has a construction easement 30m wide, creating a construction area of circa 435ha.

The pipeline traverses through the Western Downs and Banana Regional Council areas, crossing private farming land, road reserves and mining and petroleum tenures, as well as creeks and roads owned by the State or local government (see *Figure 1*).

The Project was approved on 27 September 2012 under EPBC 2011/6181. The approval required offsets for significant impacts to MNES of up to 1.38ha of the TEC Coolibah-Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions.¹¹

3.1 Vegetation values of the impact site

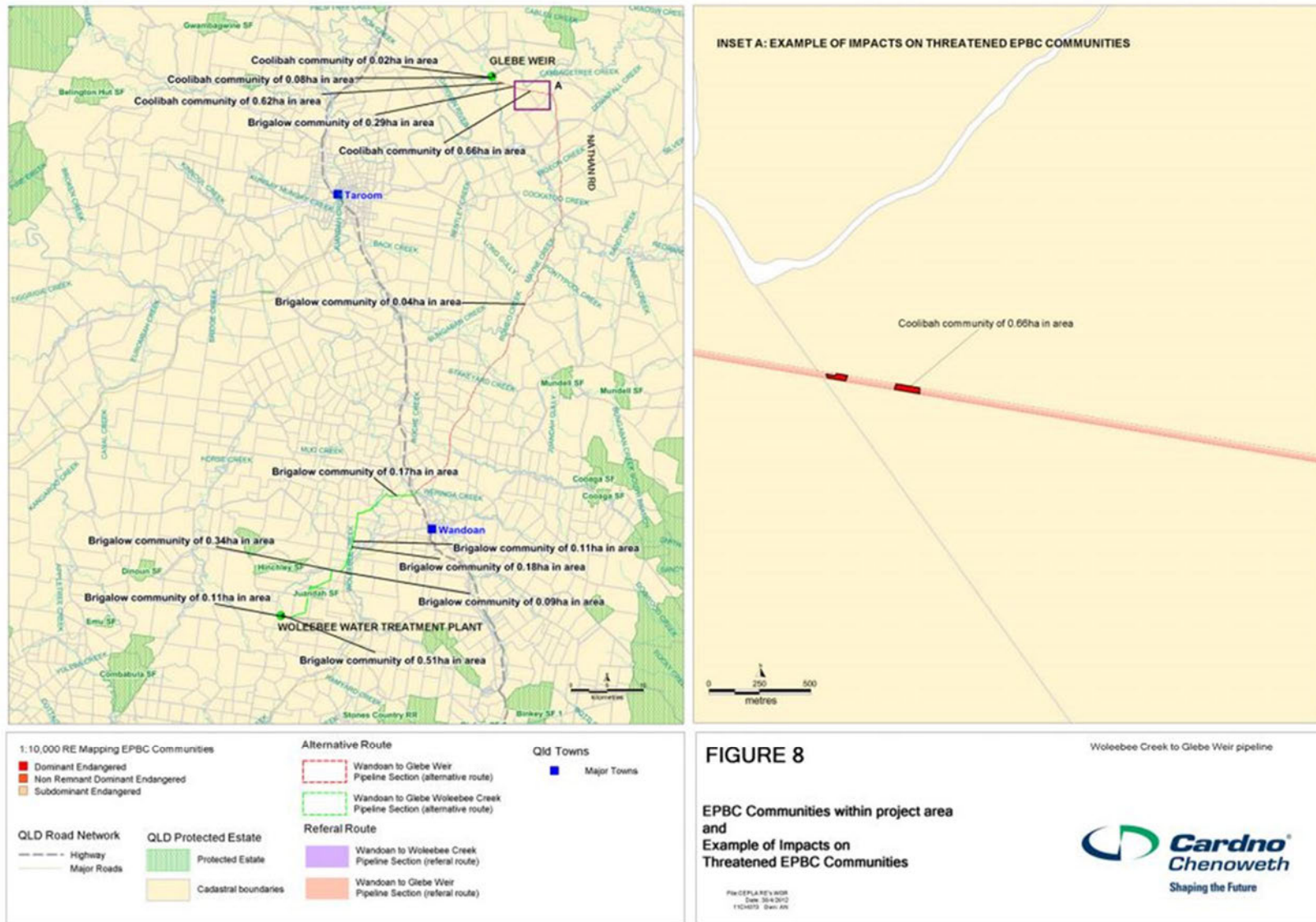
The impact site was surveyed and field verification undertaken by SLR in 2013.¹² The RE mapping for the impact site (and lot) was field-verified and mapped.

The land to be impacted by the Project contained remnant and non-remnant vegetation, including regrowth vegetation containing scattered trees and grassland, having previously been used for cattle grazing. To assist determining the vegetation types occurring on the site before clearing, a preclearance regional ecosystem map was prepared by SLR. The vegetation occurring along the pipeline route was mapped by SLR (Part B of the Woleebee Creek Biodiversity Offset Strategy).

¹¹ Condition 4, Approval Woleebee Creek to Glebe Weir Pipeline Project, Queensland (EPBC 2011/6181)

¹² *Woleebee Creek to Glebe Weir Pipeline Vegetation Offset Strategy*, Version 7, 11 January 2013

Figure 2: Impact site – ground-truthed vegetation (from SLR, 2012)



4 Offset property overview

4.1 Overview of selected offset property – ‘Stoney Creek’

Stoney Creek (Lot 2 LR37) is an agricultural cattle property, with an area of 4,876 hectares, located 20 km north of Duaringa in central Queensland, within the Woorabinda Aboriginal Shire Council local government area. The property’s western boundary is the Mackenzie River, which is a state recognised biodiversity corridor, and the eastern boundary is a range that runs south to north and joins the Goodedulla National Park.

4.2 Offset Investigation Area – Offset Area 1

In consultation with the landowners, in 2018, an offset investigation area (**OIA**) was delineated on Stoney Creek, to undertake ecological assessments and identify biodiversity values that are relevant to the offset requirements for several Sunwater projects.

‘Stoney Creek offset area 1’ is 10 ha in area and consists predominantly of regrowth RE 11.3.3 which is Coolibah regrowth. The area is currently used as cattle grazing, is degraded, has low dry matter yield and low groundcover (<10%) and has a significant infestation of invasive plant species parkinsonia (*Parkinsonia aculeata*). Offset Area 1 is a subset of the larger Offset Investigation Area that has been negotiated for the Rookwood Weir Project (Sunwater EPBC 2009/5173). The Mackenzie River adjoins the boundary of the entire offset area and flows in a north to south-east direction.

The ecological assessment¹³ focused on vegetated areas, particularly those along, and adjacent to, the riparian corridor of the Mackenzie River. These areas comprised areas of regulated vegetation mapped by the Department of Natural Resources, Mines and Energy (**DNRME**), including remnant and regrowth vegetation and non-remnant vegetation associated with alluvial plains.

The entire Sunwater OIA area comprises approximately 2,793 ha located along a 23 km area of land associated with the Mackenzie River bioregional corridors and surrounding vegetation on alluvial plains. The area is dissected by a number of relic river channels which carry significant volumes of water even during low-level floods. These channels leave the river within the offset area or north of it and then re-enter the main channel above the Apis Creek Road crossing.

The selected offset area for this Project comprises regrowth RE 11.3.3 (*Figure 5*).

¹³ Offset assessment Offset Suitability Assessment, Foley Vale and Stoney Creek, ARE 2019

Figure 3: Location of the impact site in relation to the OIA and offset site



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 Queensland Government
 Department of Resources

Figure 4: State biodiversity corridors in relation to the offset site (ARE, 2020)

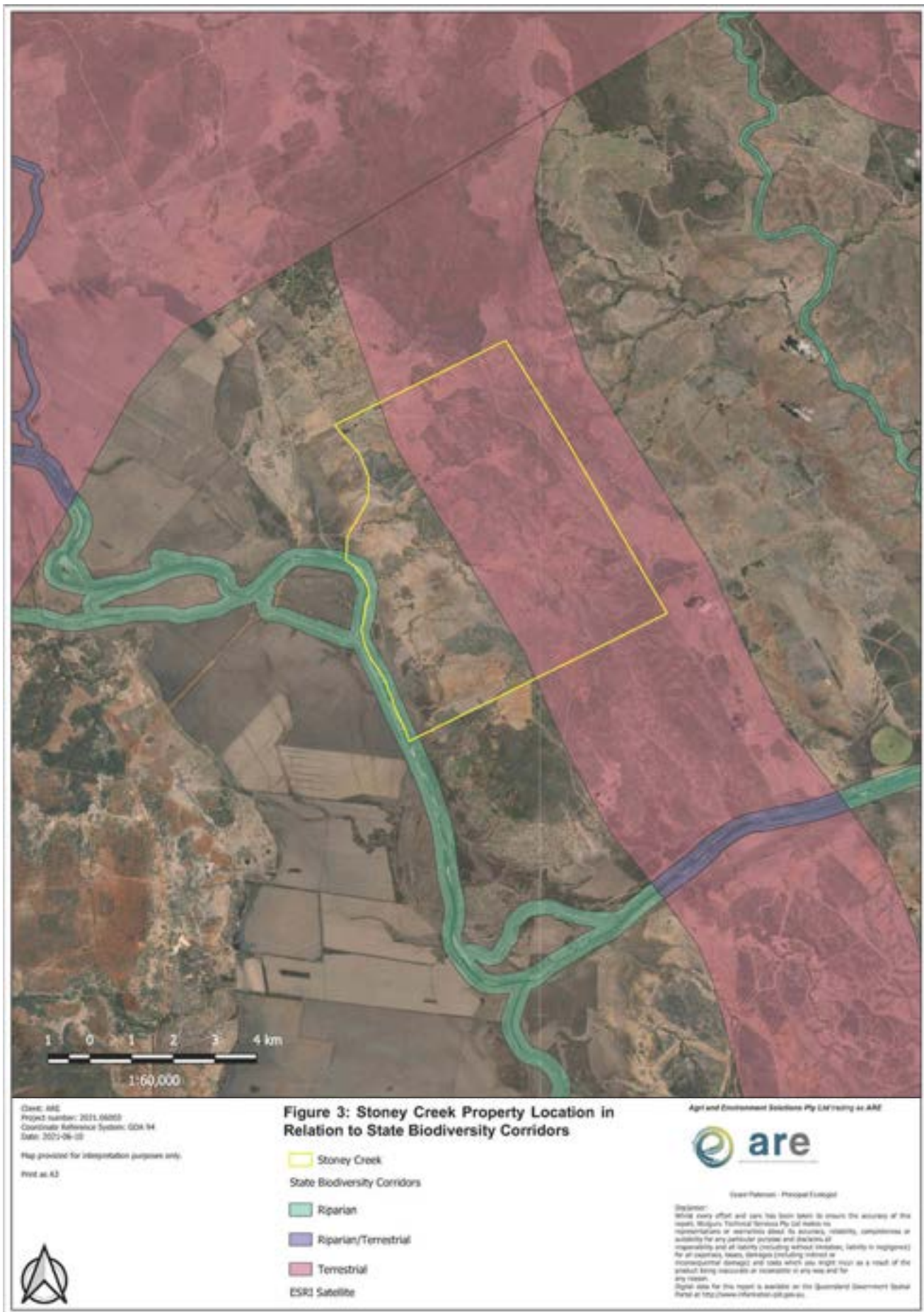
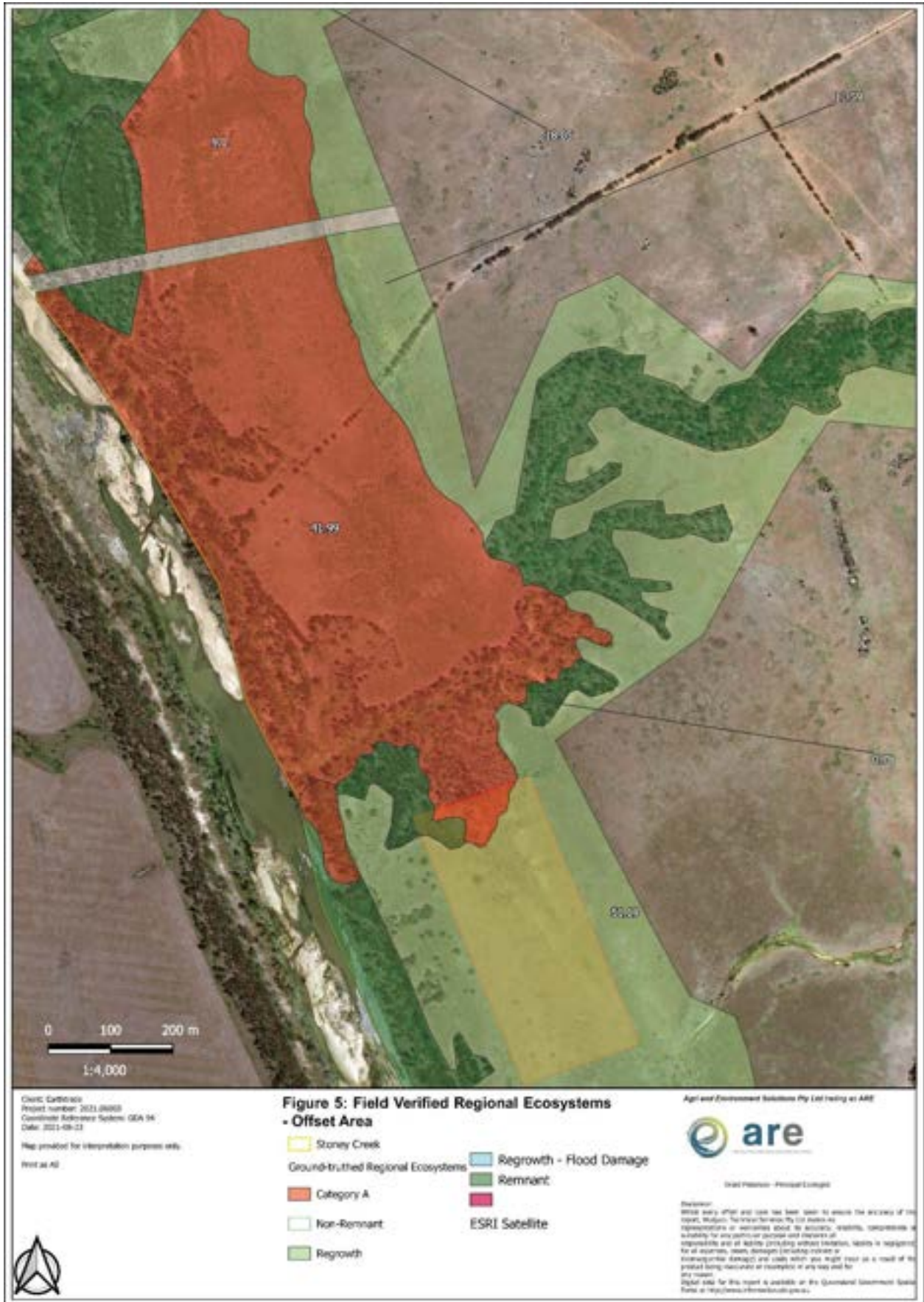


Figure 5: Field verified regional ecosystems – offset investigation area



5 Offset site biodiversity values

5.1 Site assessment to determine the values

An assessment of the OIA was undertaken by ARE (ecologists) in November 2019, to identify the ecological values of the OIA. The values have been reported in 'Offset Suitability assessment, Foley Vale and Stoney Creek' (ARE 2019). The scope of the assessment included:

- a desktop review of available vegetation mapping and environmental database records
- ground-truthing of the DNRME mapped REs and identifying MNES TECs
- BioCondition surveys for habitat quality assessments conducted in accordance with the Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 4.0) within vegetation (i.e. relevant broad vegetation groups (**BVGs**), REs and habitat) suitable for offsetting MNES and matters of state environmental significance (**MSES**) values associated with the Project.

Within the offset investigation area, the area suitable for the TEC was calculated based on the values occurring, condition and the DAWE Offset Assessment Guide (**OAG**) requirements.

5.2 Offset site selection

The offset area has been selected from within the OIA (see *Figure 5*). The site has been selected for:

- The RE is present, and although does not meet the criteria at this point in time, it will become the Coolibah Woodlands TEC
- The extent of the area available
- Connectivity to bioregional corridors and other existing or planned offset areas
- The offset site is located in an area that is manageable and the actions required in this management plan are achievable.

5.3 Landscape-scale connectivity values

The proposed offset site was selected for its potential to provide an offset for the matters to be impacted and because it meets the requirements of the offset policy. This can be achieved by increasing the habitat, connectivity and other ecological values within the surrounding area. Given the area is currently composed of degraded tracts of unregulated regrowth; utilising the regrowth vegetation as an offset will add significant value to this area. It will be achieved by extending the area of the TEC.

The site will also enhance landscape connectivity over time, by improving the regrowth vegetation to become remnant vegetation will enable patches of existing regulated vegetation to be linked, improving resilience of patches and increasing the area of habitat that can be utilised by flora and fauna, including koalas, greater glider and squatter pigeon.

Connectivity of riparian reaches within the creek systems of the offset site will be enhanced, and additionally they will increase the area of connectivity with the state biodiversity corridor to the west. The connectivity corridors surrounding the offset area are illustrated in *Figure 4*.

6 Offset site start values

The extent of the offset area has been determined utilising agreed outputs from the DAWE OAG. The start values scores are taken directly from Appendix D of the Ecology Report¹⁴.

7 Offset completion criteria and performance targets

Section 7.8 of the EPBC EOP requires that the Management Plan include 'transparent governance arrangements including being able to be readily measured, monitored, audited and enforced'. These management outcomes/intents for the offset areas are set out in *Table 5* of this OMP.

Offset completion criteria have been determined for the offset (*Table 5*). These completion criteria were derived from the detailed ecology survey information utilising the current methodology within the *Guide to determining terrestrial habitat quality* (DES, 2020). The targeted completion criteria meets guidelines published by ANZMEC (2000)¹⁵ stating completion criteria should be:

1. Specific enough to reflect unique set of environmental, social and economic circumstances
2. Flexible enough to adapt to changing circumstances without compromising objectives
3. Include environmental indicators suitable for demonstrating that rehabilitation trends are heading in the right direction
4. Undergo periodic review resulting in modification if required due to changed circumstances or improved knowledge
5. Based on targeted research which results in more informed decisions.

Over the course of the management period a set number of interim completion criteria have been proposed for the TEC to track the trajectory of condition improvement towards the desired final completion criteria. The timing for these interim targets corresponds with the detailed ecological condition monitoring in 2026, 2031 and 2036, with a final survey undertaken in 2041.

Interim targets were derived by identifying the attributes expected to increase over the period of the approval. The values were determined by differentiating between specific attributes of which the majority were longer term targets (e.g. species richness, tree canopy cover, number of large trees) and those where an initial benefit could be realised early (e.g. recruitment of woody species, non-native plant cover).

The completion of management actions identified in *Table 8* will enable the offset site to improve and achieve the scores required in *Table 5*, thus meeting and maintaining the completion criteria required of the offset.

The annual reports will provide transparency regarding how the site management actions are being implemented, and where relevant, identify any force majeure events impacting the offset site, and any non-compliance with the management plan.

¹⁴ Offset assessment Offset Suitability Assessment, Foley Vale and Stoney Creek, ARE 2019

¹⁵ Australian and New Zealand Minerals and Energy Council (ANZMEC). 2000. Strategic Framework for Mine Closure.

Table 5: Interim targets and completion criteria

Protected matter	EPBC Status	Impact area (ha)	Habitat quality score	Assessment Unit	Assessment Sites	Offset area (ha)	Regional ecosystems	Habitat start quality score	Habitat quality score Year 5	Habitat quality score Year 10	Habitat quality score Year 15	Habitat finish quality score*
Coolibah TEC	Vulnerable	1.38	7	1	T4	10.00	11.3.3	4.6	5	6	7	7

Baseline assessment is contained within Appendix D of the Offset assessment Offset Suitability Assessment, Foley Vale and Stoney Creek, ARE 2019 which is at *Appendix 1.2*.

The methodology that was used in the assessment of the offset area, and is of this document) is:

Habitat Quality assessments are to be conducted in accordance with the Guide to Determining Terrestrial Habitat Quality Version 1.2 (DEHP, 2017) and the same methodology is to be used throughout the monitoring and reporting period (*Section 11*) for this OAMP.

The same bio-condition benchmark (Department of Environment and Science, 2019). for RE 11.3.3 is to be used to compare the changes in condition from the start quality score. This benchmark data is contained within the ecology report at *Appendix 1.2*.

Part B: Land Management Plan

8 Analysis of risks to achieving management objectives and offset completion criteria

Potential risks to achieving the management objectives and outcomes have been considered in the plan (*Table 7*). They have been assessed against the risk matrix (*Table 6*) that was supplied by the DAWE.¹⁶ The risk matrix has been used to assess the risk that the plan's objectives will not be met and identify the sources of those risks and strategies for managing them.

The risk assessment:

- a) identified events that will, may, or are likely to impact the attainment of the completion criteria
- b) assessed the likelihood and consequences of those events, and characterises residual risk levels, taking into consideration the mitigation of the risk by implementing the management actions
- c) identified the level of uncertainty in mitigating the risk with the management actions and trigger criteria and corrective actions until the risk is reduced to an acceptable level.

¹⁶ 2007/3643 OMP Guidance dated 15.01.2019

Table 6: Risk matrix

RISK MATRIX						
Qualitative measure of likelihood (how likely is it that this event/circumstances will occur after management activities are implemented)						
Highly likely	Is expected to occur in most circumstances					
Likely	Will probably occur during the life of the project					
Possible	Might occur during the life of the project					
Unlikely	Could occur but considered unlikely or doubtful					
Rare	May occur in exceptional circumstances					
Qualitative measure of consequences (what will be the consequence/result if the issue does occur)						
Minor	Minor incident of environmental damage that can be reversed <i>(e.g. short-term delays to achieving plan objectives, implementing low-cost, well-characterised corrective actions)</i>					
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts <i>(e.g. short term delays to achieving plan objectives, implementing well-characterised, high-cost/effort corrective actions)</i>					
High	Substantial instances of environmental damage that could be reversed with intensive efforts <i>(e.g. medium-long term delays to achieving objectives, implementing uncertain, high-cost/effort corrective actions)</i>					
Major	Major loss of environmental amenity and real danger of continuing <i>(e.g. plan objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies)</i>					
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage <i>(e.g. plan objectives are unable to be achieved, with no evidenced mitigation strategies)</i>					
		Consequence				
		Minor	Moderate	High	Major	Critical
Likelihood	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Table 7: Risk assessment for the offset site

Note: The risk ranking codes relate to the risk matrix as follows: L = Likelihood C = Consequence R = Risk

Risk	Threats	Initial risk ranking			Management measures	Management measures/actions	Residual risk ranking		
		L	C	R			L	C	R
<i>Force majeure events</i>									
Mining of the offset site	No current permits cover the proposed offsets site. Open cut mining may produce full clearing of the offset site.	Rare	Critical	High	Offset area management	No current permits cover the proposed offsets site. The legal security over the site makes it known that the area is an offset. No available legal mechanism would render mining impossible on the offset site, however the Voluntary Declaration under the VMA would significantly increase offset obligations upon any person proposing to impact the offset site.	Rare	Critical	High
Drought	The threat posed by drought is a decrease in dry matter yield and groundcover, an increase in the likelihood of unplanned fire due to the dry conditions that could be started by lightning strike during storms and an increase in weed cover when rainfall was received. There would also be lower levels of growth expected.	Likely	Moderate	Medium	Offset area management Grazing management	Cattle will be excluded from the offset area during times of drought. Limited mitigation measures can be implemented. Should the offset be deemed by the approval holder or the Department to be delayed due to drought, both parties will work together to determine an appropriate response.	Likely	Moderate	Medium
Cyclones/ severe tropical lows/ flooding	The most significant impact from tropical cyclones or tropical lows is typically flooding. Systems generally form between November and April.	Likely	Moderate	Medium	Offset area management	Limited mitigation measures can be implemented. The offset area on Stoney Creek is in the lower part of the landscape and subject to flooding from the Mackenzie River across the associated alluvial flats. The TEC is well adapted to these events. Wind damage to bigger trees would be expected to be the largest impact. However, cyclones and/or severe tropical lows are relatively infrequent (though likely to occur at some point during the life of the approval). However, flooding is not expected to be of sufficient duration, and winds are not expected to be sufficiently severe, to cause substantial long-term harm to the site. Additionally, the increased availability of soil moisture following flood is expected to increase growth rates following flooding events, likely assisting natural repair of any potential damage. Increased soil moisture may assist weed growth, so a meander survey across the entire site will occur as soon after the end of a cyclone and any associated flooding as is safe and reasonably practicable to detect any areas of increased weed density. Flooding may also contribute to erosion (see below).	Likely	Minor	Low
<i>Degradation of habitat or vegetation loss through land clearing</i>									
Degradation of habitat	The degradation of habitat due to the lack of environmental management of the offsets area including appropriate grazing regimes, invasive plant control, fire management, and/or infrastructure maintenance.	Possible	High	Medium	Offset area management Grazing management	Implementation of the management actions and adaptive management framework as outlined in this OMP	Unlikely	Minor	Low
Erosion	Raindrops hit bare soil with enough force to break the soil aggregates. These fragments wash into soil pores and prevent water from infiltrating the soil. Water then accumulates on the surface and increases runoff which takes soil with it.	Highly likely	Minor	Medium	Offset area management Grazing management	The expected severity of erosion at this site may occur due to topography of the site. However, that risk can be further reduced. At least dry matter yield of 950kg/ha will be maintained at all times and stock will be removed from the offset site before that minimum level would be breached.	Possible	Minor	Low
Timber harvesting/ collection	Unauthorised access to the offset area may result in timber harvesting/collection Such actions would delay the establishment of the TEC.	Unlikely	Moderate	Low	Offset area management Site access control	Complete the installation of signage at all vehicle accesses identifying the areas as an environmental offset, within six months of the approval of this OMP. Complete the installation of any new planned fences, within six months of the approval of this OMP. All field monitoring (rapid and detailed) will report on any evidence of timber harvesting.	Rare	Moderate	Low

Risk	Threats	Initial risk ranking			Management measures	Management measures/actions	Residual risk ranking		
		L	C	R			L	C	R
Unplanned clearing	<p>The offset site occurs within Stoney Creek, a property that is used for cattle production. It is possible for unplanned / illegal clearing for agriculture activities but considered improbable as the offset site will be mapped as Category A on the PMAV.</p> <p>Clearing can also occur by vehicles traversing the area off designated roads/tracks and/or illegal camping. This is also considered improbable, as the site is remote and access to the site will be restricted.</p> <p>The most plausible (though still unlikely) cause of unplanned/illegal clearing would be if aerial spraying on adjacent properties strayed across the offset boundary.</p>	Unlikely	Major	High	<p>Offset area management</p> <p>Site access control</p>	<p>Complete the installation of signage at all vehicle accesses identifying the areas as an environmental offset, within six months of the approval of this OMP.</p> <p>Complete the installation of any new fences, within six months of the approval of this OMP.</p> <p>Within six months of the approval of this OMP, register a Voluntary Declaration over the Offset Site, ensuring it is shown as Category A vegetation on the PMAV.</p> <p>All monitoring will report on any evidence of clearing.</p>	Rare	Major	Medium
<i>Fire: the impact from uncontrolled fire would be a reduction in groundcover, thinning of the canopy and slowing of the offset site achieving the completion criteria</i>									
Unplanned or non-controlled fire in offset area.	The impact from uncontrolled fire would be a reduction in dry matter yields and overall groundcover, thinning of the canopy, destruction of regrowth and emerging saplings and an overall slowing of the offset site achieving the completion criteria.	Likely	Moderate	Medium	Fire management	The offset site is comprised of regrowth eucalypt species circa 3-4m in height that are in excess of 6 years of age. These communities are adapted to fire and the risk of a 100% loss is low due to lower dry matter yields (fuel load) within the communities that are further managed with grazing.	Possible	Minor	Low
Increased fire risk due to high fuel loads	During periods when a low-level grazing regime has occurred and an average or above average wet season, there is an opportunity for fuel loads in the form of dry matter to accumulate to unacceptable levels. When this occurs and the high levels of fuel are present prior to summer, then the risk of wild and/or high-intensity fires is exacerbated.	Possible	High	Medium	Fire management	<p>Graze to reduce dry matter yield to <2,000kg/ha.</p> <p>A cold fire to be used during the months of June, July, August and September when wind speeds are less than 5km/h on the offset site.</p>	Unlikely	Minor	Low
<i>Invasive plants: introduction, establishment and spread of non-native weeds including restricted invasive plants listed under the Biosecurity Act 2014 (Qld)</i>									
New infestations of invasive weed species in the offset area.	<p>Infestation of previously unidentified invasive weeds within the offset area.</p> <p>If a weed infestation is unchecked, it may cause a significant deterioration in the offset site.</p>	Possible	High	Medium	Invasive plants management listed under the Biosecurity Act 2014 (Qld)	<p>Access to the offset area will be limited, to reduce/prevent pathogen/propagule transmission vectors.</p> <p>All vehicles accessing the offset area are required to have undergone a weed inspection and vehicle hygiene check, confirming that they are weed free, before accessing the site.</p> <p>If a new weed infestation is identified, weed management measures will occur as per Table 8.</p>	Unlikely	Minor	Low
Expansion of existing infestations of declared weed species in the offset area	The extent of existing infestations of restricted invasive plants species expand or the species become more abundant within the area.	Highly likely	High	High	Invasive plants management listed under the Biosecurity Act 2014 (Qld)	<p>Access to the offset area will be restricted.</p> <p>Chemical and/or mechanical control of all restricted invasive plants in accordance with the control measures outlined in the Biosecurity Queensland Fact Sheets or other sources of information.</p>	Unlikely	Minor	Low
<i>Pest/feral animals in the offset area</i>									
Increased population of feral animals in the offset area.	Wild cat, pig and dog populations are extensive and highly transient, and therefore the scale of impact is potentially large. Major damage to the environment/habitat occurs when large numbers of animals congregate in the area.	Highly likely	High	High	<p>Pest animal management</p> <p>Feral pig management</p>	<p>Current control of pigs and wild dogs is undertaken via a baiting program on the property.</p> <p>Additionally, the Pastoral Manager, during quarterly inspections of the offset area may remove any wild cats, pigs or wild dogs that are seen. If an increase in pig or dog activity is noted, an additional trapping, baiting and/or control program is to be instigated until the increased activity has ceased.</p>	Possible	Minor	Low

Risk	Threats	Initial risk ranking			Management measures	Management measures/actions	Residual risk ranking		
		L	C	R			L	C	R
<i>Degradation of habitat by overgrazing</i>									
Unauthorised or inappropriate grazing in offset area	<p>High density grazing over an extended period destroys shrubs and native grass cover and slows the regeneration of habitat.</p> <p>The natural condition of the native ground cover is a low cover and hence any grazing undertaken is to reduce exotic grass cover whilst retaining a minimum of 700kg/ha of dry matter yield at the end of the dry season.</p> <p>Stocking rates are not fixed as this region is subject to significant changes in grass cover with seasonal conditions.</p>	Possible	High	Medium	Grazing management	<p>Fences are in working order and allow for exclusion of cattle when needed.</p> <p>Signage will be installed on all major access gates to ensure the Environmental Offset Area is well signposted.</p> <p>Stocking rates are not fixed as this region is subject to significant changes in grass cover with seasonal conditions. However, grazing used as required when ground cover exceeds 60% and the fire risk is high.</p> <p>Cattle are excluded from all areas during the wet season.</p> <p>Cattle are excluded from all areas during</p>	Unlikely	Minor	Low
<i>Degradation of habitat or vegetation loss through thickening of native vegetation</i>									
Thickening of vegetation in the offset area	<p>Clearing or the harvesting of the larger trees for sawlogs and other timber products has resulted in a large number of eucalypt seedlings establishing resulting in a thickened or high stem density.</p> <p>The soil has a finite resource of nutrients and water, and this high density of stems results in a situation whereby the stems cease growing and stay at an immature condition/size unless a force majeure event or intervention occurs to reduce the stem density and therefore allowing larger trees to establish and therefore hollows to be produced.</p>	Possible	High	Medium	Offset area management	Ecological burns to be undertaken to reduce the stem density of the eucalypt vegetation when there is a density of >250 stems/ha to promote larger trees becoming established.	Unlikely	Minor	Low
<i>Offset fails to achieve the interim performance targets and/or completion criteria within the anticipated 5-, 10-, 15- and 20-year timeframes, respectively</i>									
Offset fails to achieve the interim performance targets and/or completion criteria within the anticipated 5, 10-, 15- and 20-year timeframes, respectively	Failure to achieve and maintain offset completion criteria	Possible	High	Medium	Offset area management	<p>Implement the management actions of this OAMP.</p> <p>Monitor and report on attainment of interim environmental performance targets and completion criteria.</p>	Unlikely	High	Medium

9 Offset management measures

The offset area management measures include, but are not limited to, management actions required on the offset site to abate those threats identified to the TEC. The offset area management measures provide for the management, reporting, and the monitoring program that will be undertaken until the offset achieves the completion criteria. Protection of the offset area will be maintained under the VMA through a change in vegetation class protection. This is achieved by the registration of a voluntary declaration (**VDec**) on the title of the property, under the VMA (see *Section 12*).

The management actions include:

- limiting vegetation clearing to only those areas required for maintaining fencing and fire control lines
- prohibiting alternate land use and activities during the period of the VDec (e.g. timber harvesting, cropping, vegetation thinning etc.)
- restricting unauthorised access
- excluding domestic livestock from the offset area except for the infrequent grazing associated with fuel reduction in dry periods
- controlling feral animals
- managing fire
- controlling weeds.

The management schedule describes the actions to be undertaken on the offset site (*Table 8*).

Regular offset area reports will be prepared by the proponent as listed in *Table 11* (refer to *Section 11*). These will report against each of the management actions shown in *Table 8*. As these management actions enable the offset site to improve to achieve the scores shown in *Schedule 2*, thus attaining and maintaining the completion criteria required of the offset. The reports will provide transparency regarding how the site management actions are being implemented, and where relevant, identify any force majeure events impacting the offset site, and any non-compliance with the management plan.

Table 8: Management actions, triggers and corrective actions

The management actions shown in this table are consistent with the risks identified in the listing advice, conservation advices, and threat abatement plans in *Table 4*.

Management measures	Management objective	Management actions	Performance criteria	Monitoring	Trigger for adaptive management and corrective action(s)	Corrective offset management actions
Offset area management	Maintain the extent of offset value habitat within the offset area	Protection of the offset area via a voluntary declaration under Section 19E and 19F of the VMA, as described in <i>Section 12</i> , to be registered within six months of the approval of this OMP.	No unapproved and/or intentional clearing of vegetation within the offset area, except for clearing that is required for fencing, access, firebreaks and public safety, Ecological thinning may be carried out, but only on and in accordance with the advice of a Principal Ecologist with >15 years' experience in Central Queensland, and only with the prior written agreement of DAWE	Reporting to the Australian Government consistent with all EPBC Act approval(s).	Any activities in contravention of the Voluntary Declaration	Step 1: Investigate cause of trigger (e.g. unauthorised access) <ul style="list-style-type: none"> As soon as practicable, and in any case within one month of detection of the trigger, identify appropriate corrective actions. Step 2: Implementation of corrective action/s <ul style="list-style-type: none"> As soon as practicable, and in any case within two months of detection of the trigger, the appropriate corrective actions must be implemented. These may include (though are not limited to) additional fencing and/or signage and security for the offset area.
		Comply with the restrictions on clearing established throughout this OMP. If vegetation clearing is required for fencing, access, firebreaks or public safety it must be undertaken in accordance with best practice management methods and any applicable legislative requirements. Authorised ecological thinning via chemical and/or mechanical means, including brushcutter, chainsaw and individual tractor.		Quarterly inspections will monitor and document if there is evidence of recent forestry or timber harvesting activities.	Detection of prohibited forestry operations, native timber harvesting or clearing outside of established access tracks, fire control lines and fence lines (existing infrastructure).	Step 1: Investigate cause of trigger <ul style="list-style-type: none"> Upon being notified or becoming aware of prohibited forestry operations, native timber harvesting or clearing outside of existing infrastructure, the Approval Holder is to assess how unauthorised persons accessed the site, review existing access restrictions, and inspect signage and offset area fencing within one fortnight of detection of the clearing. Step 2: Implementation of corrective action/s <ul style="list-style-type: none"> All actions required to prevent recurrence of the prohibited clearing will be completed within one month of detection of the clearing. Thin thickened eucalypt REs down to 100 stems/ha including the retention of the largest stems at a stocking rate as per the benchmark for that RE
Offset area management	Achieve the interim performance targets and completion scores in <i>Section 7</i> at years 5, 10, 15 and 20 years, respectively.	All management actions outlined in in this OMP will be implemented to ensure that the interim performance targets and completion criteria are achieved.	The interim performance targets are achieved by year 5, 10 and 15. The completion criteria are achieved by year 20.	Monitoring of the offset area will be undertaken in accordance with <i>Section 11</i> . The results of monitoring events will be compared against the interim performance targets and completion criteria to determine the progress of the offset area and recorded as part of reporting.	The interim performance targets are achieved by year 5, 10 and 15.	Step 1: Investigate cause of trigger <ul style="list-style-type: none"> Within one month of detection of the trigger, complete an investigation into the reasons why the interim performance targets or the completion criteria were not achieved within the specified timeframes. This investigation must re-evaluate the suitability of the relevant management measures in the OMP and must identify appropriate corrective actions. Step 2: Implementation of corrective action/s As soon as practicable, and in any case within eight months of detection of the trigger, complete implementation of the corrective actions identified under Step 1. These may include (though are not limited to):

Management measures	Management objective	Management actions	Performance criteria	Monitoring	Trigger for adaptive management and corrective action(s)	Corrective offset management actions
						<ul style="list-style-type: none"> Increasing the frequency and intensity of pest animal and weed control measures or revising the type of measures to be implemented. Modifying the fire management measures, to better support enhancement of offset values. If the investigation under Step 1 recommends changes to the management regime, then as soon as possible, and in any case within six months of detection of the trigger, implement a revised OMP incorporating those recommended changes.
<i>Grazing management</i>	Ensure that any livestock grazing for fire management and weed control maintains and enhances the ground cover attributes for MNES and does not result in the degradation of habitat and vegetation	<p>Stock will be grazed only when required to reduce dry matter yield in non-remnant areas (i.e.: when dry matter yield exceeds 2,000kg/ha), and only during the dry season.</p> <p>The dry season is normally between April and November; however, if unseasonal rainfall should occur, then grazing is to be allowed. Cattle are to be removed if more than 25mm of rain is received during grazing periods.</p> <p>Cattle will be excluded from the offset area during times of drought.</p>	Increase the species richness and average % cover of native perennial grasses at each habitat quality assessment site based on the results of baseline and subsequent monitoring events	Habitat quality assessments will be undertaken in accordance with <i>Section 11</i> .	<p>Detection of stock grazing outside of the dry season, or during the exclusion period or during times of drought.</p> <p>Decrease in the richness and average ground layer cover at one or more habitat quality assessment sites based on the results of baseline and subsequent monitoring events</p>	<p>Upon being notified or becoming aware of prohibited stock grazing in the offset area, the Pastoral Manager is to remove the stock from the area (if present) and assess the adequacy of fencing within 10 days. The Pastoral Manager is to undertake fence maintenance and repairs to resecure the offset area within 10 days.</p> <p>Exclude stock grazing during times of drought until dry matter yields achieves levels specified in <i>Table 8</i> at the end of the dry season</p>
<i>Invasive plants management listed under the Biosecurity Act 2014 (Qld)</i>	Manage restricted invasive plant species to reduce degradation of MNES habitat	<p>The primary control method for exotic grasses will be grazing by cattle and then maintaining dry matter yields and overall groundcover, which will be undertaken during the dry season (that is, from April to end of October each year).</p> <p>Parkinsonia will require foliar spraying or cut stump methods initially</p> <p>Invasive plant control will be undertaken as early as practicable within the natural regeneration process throughout the offset areas and then periodically as required to treat the invasive plants at the optimum time in their life cycles to control and minimise the spread of the existing invasive plant species.</p>	<p>Invasive plant cover must not exceed 10% cover of the offset area by year 20.</p> <p>No new restricted invasive plants listed under the <i>Biosecurity Act 2014 (Qld)</i> are identified at any monitoring site (based on subsequent monitoring events).</p>	<p>Monitoring of this management action will be undertaken by the Pastoral Manager, Landholder or suitably qualified person appointed by the Landholder at least four times annually.</p> <p>Weed cover is to be monitored by the same methodology and at the same time as the ground cover measurements.</p> <p>Quarterly inspections will observe and record the presence of weeds and the success of previously applied weed control measures. The inspection will include before and after photos of the weed control area.</p> <p>Quarterly inspections will be conducted by the Pastoral Manager, Landholder or suitably qualified person appointed by the Landholder to record the ground cover in the offset area.</p>	<p>Pest plants dominate in an isolated area and/or occur in an area greater than 10% of the offset area.</p> <p>A new declared invasive plant species is identified at one or more monitoring sites, or opportunistically during any site inspection or other monitoring.</p>	<p>Step 1: Investigate cause of trigger</p> <p>Step 2: Implementation of corrective action(s)</p> <p>Upon being notified or becoming aware of pest plants dominating isolated areas and or occupying greater than 10% of the offset area, the Pastoral Manager is to implement pest control measures within one month. These measures may include, and are not limited to:</p> <ul style="list-style-type: none"> foliar spraying basal bark spraying stem injection cut stump cut and swab stem scraper wick applicators.
<i>Pest animal management</i>	Minimise the introduction of pest animals and control of existing	Implement control actions for pest animals in accordance with <i>Section 9</i> .	Detection of twelve or more wild pigs or dogs during any inspection.	Undertake monitoring for pest animals in accordance with <i>Section 11</i> .	Any observed evidence of feral animal presence (that is, an indicator of feral	<ul style="list-style-type: none"> Upon being notified or becoming aware of pest animal populations exceeding the threshold, the Pastoral Manager is to implement all

Management measures	Management objective	Management actions	Performance criteria	Monitoring	Trigger for adaptive management and corrective action(s)	Corrective offset management actions
	populations of pest animals (wild dogs, pigs, feral cats and foxes) within the offset areas in accordance with the <i>Biosecurity Act 2014</i> (Qld).	Participate fully in, and cooperate with, any and all regional pest control programs, unless those would otherwise contravene a part of this OMP.			animals required to be recorded as part of the feral animal monitoring requirements by the landholder detailed in <i>Table 10.</i>)	necessary or appropriate control measures needed to reduce pest animal populations to below trigger thresholds. The land manager is to have completed implementation of all necessary or appropriate pest control measures within one month. <ul style="list-style-type: none"> The Pastoral Manager or Landholder may approach neighbouring landowners to discuss the increased pest animal presence and an integrated control program may be developed. If an integrated control program is considered appropriate, the land manager will make best endeavours to reach agreement with neighbouring landowners to implement such a program. If impacts from the pest animal populations have not naturally remediated within six months of completion of implementation of the control measures, the land manager is to undertake and complete all works required to remediate those impacts.
<i>Feral pig management</i>	Minimise degradation of MNES habitat by feral pigs.	Implement control actions for feral pigs in accordance with <i>Section 9</i> . Participate fully in, and cooperate with, any and all regional pest control programs, unless those would otherwise contravene a part of this OMP.	Reduction in mean feral pig abundance from the first year of management	Monitoring of this management action will be undertaken by the Pastoral Manager, Landholder or suitably qualified person appointed by the Landholder at least four times annually. Quarterly inspections will involve traversing the offset area, with streams, low lying areas and vehicle access tracks being noted to record the presence of wallow holes, tracks and visual incidents in the offset area. If detected, these areas will be GPS-recorded and photographed and rechecked at the next quarterly inspection.	An increase in mean feral pig abundance from first year and subsequent monitoring events.	
<i>Fire management</i>	No evidence of unplanned and uncontrolled fire in the offset area	Implement fire management in accordance with requirements in this OMP. If one or more bushfires are current in the region and considered potentially threatening to the site, coordinate with all relevant fire authorities to determine the appropriate method of protecting the site (if the relevant fire authorities advise against seeking to protect the site from a specific fire, the approval holder may comply with that advice without needing approval or agreement from DAWE). The approval holder will maintain firebreaks along all external boundaries of the offset area. Fire control lines must be inspected quarterly. Maintenance must be undertaken as required and at least once every two years. Ecological burns to be undertaken to reduce the stem density of the eucalypt vegetation when there is a density of > 250 stems/ha to	Uncontrolled fire does not occur in the offset area. Planned and controlled ecological burns are restricted to <25% of the offset area in any 12-month period.	Monitoring of this management action will be undertaken by the Pastoral Manager, Landholder or suitably qualified person appointed by the approval holder at least four times annually. Quarterly inspections will monitor and document if there is evidence of wildfire, prohibited burning or force majeure events. Quarterly inspections will monitor and document if a prescribed low-intensity ecological burn has occurred, and recorded in the annual report with the written advice from an ecologist or other suitably qualified person (e.g. Fire Warden) Weed cover is to be monitored by estimating it as a % of groundcover, and is to be undertaken at the same time as the dry matter yield assessment. Weed control is to be undertaken post a fire event to ensure weed cover (WoNS) is <10%. Ground cover measurements must be in accordance with Methodology 2B as stated in the <i>Land Manager's</i>	Destruction of, or significant damage to, regrowth or fallen timber. The occurrence of deliberately lit fires.	Step 1: Investigate cause of trigger <ul style="list-style-type: none"> Within one month of detection of the trigger, complete an investigation into the reasons why the fire management measures have resulted in a decrease in habitat quality scores. That investigation must review adherence to the fire management measures and must identify appropriate corrective actions. Step 2: Implementation of corrective action/s <ul style="list-style-type: none"> Upon being notified or becoming aware of a prohibited fire in the offset area, the landholder is to reassess and implement new access protocols for any lessees etc., signage and general access within one fortnight. Subsequent to any occurrence of fire in the offset area, the Pastoral Manager, Landholder or suitable qualified person appointed by the Landholder will: <ol style="list-style-type: none"> inspect and repair, and widen if necessary, all firebreaks reassess fuel load reduction practices exclude grazing until the ground cover present at the end of the dry season of that year is at a minimum of 60%

Management measures	Management objective	Management actions	Performance criteria	Monitoring	Trigger for adaptive management and corrective action(s)	Corrective offset management actions
		<p>promote larger trees becoming established</p> <p>Please note: if fire damages the offset areas, that constitutes an incident for the purposes of <i>Section 11</i>.</p>		<p><i>Monitoring Guide</i> (Department of Environment and Resource Management, 2010) (DERM)¹⁷, or any subsequent published version of this document.</p> <p>The approval holder and the land manager will keep themselves informed of any bushfires in the region.</p>		
<i>Site access control</i>	<p>Unauthorised persons, vehicles, and/or stock are prevented from accessing the site, and authorised stock are prevented from incurring during exclusion times</p>	<p>Fences will be maintained around to prevent unauthorised access and to control stock presence.</p> <p>Signs will be erected at all entrances and potential access points to the site stating that access to the site is forbidden.</p> <p>All signs and any new planned fences will be erected within six months of the approval of this OMP.</p>	<p>Public access to the offset area is prohibited.</p> <p>Access is restricted to those authorised persons required to undertake actions described in this management plan, including the landholder, and approval holder staff and their contractors and assigns.</p> <p>The offset area is not to be utilised for any purpose including recreational activities, or any other activities that deter from achieving the outcomes of this plan.</p> <p>No evidence of unauthorised persons, vehicles, and/or stock is detected on site at any point.</p> <p>Fences and signage are erected at all necessary points and kept in good repair throughout the life of the EPBC Act approval.</p>	<p>Monitoring of this management action will be undertaken by the Pastoral Manager, Landholder or suitable qualified person within 3 months of the offset area being legally secured and during quarterly inspections.</p> <p>Quarterly inspections will monitor and document evidence of unauthorised access to the offset area.</p> <p>Quarterly inspections will monitor and document if signage is fit for purpose.</p>	<p>Evidence of unauthorised persons, vehicles, and/or stock is detected at any point.</p> <p>Evidence of stock is detected at any point during exclusion times.</p> <p>Damage is detected to any fence or sign.</p>	<p>If there is evidence of unauthorised persons, vehicles, and/or stock; or evidence of stock in an exclusion area:</p> <p>Step 1: Investigate cause of trigger</p> <ul style="list-style-type: none"> Determine access method <p>Step 2: Implementation of corrective action/s</p> <ul style="list-style-type: none"> The Landholder is to reassess access protocols for any lessees etc., signage and general access within one fortnight. Damage to signage will be repaired within one fortnight of noting the damage. If there are areas that have been negatively impacted, those areas will be added to the monitoring sites at <i>Table 12</i> and monitored for their regeneration during the quarterly inspections. Signage will be repaired and maintained as required by the Pastoral Manager, Landholder or suitable qualified person appointed by the approval holder.

¹⁷ *Land Manager's Monitoring Guide: Ground cover indicator*, Department of Environment and Resource Management, 2010, Queensland Government, Brisbane, available at <http://qldgov.softlinkhosting.com.au/liberty/opac/search.do#>

10 Offset site management and protection additional to those that currently exist

Establishing an offset site on the proposed area would add additional protection for biodiversity values from clearing¹⁸ and provide additional biosecurity management.

In relation to clearing, as outlined in *Section 13*, the offset area is not protected from timber harvesting, the inappropriate use of hot fires or the under-sowing of exotic pasture species by either the VMA or the EPBC Act due to the exemption related to continuing use of the land (*Section 13*). Only the remnant vegetation areas are protected from broadscale clearing under the VMA (see the offsets map at *Figure 5*). Maintaining the existing condition of regulated vegetation and land for habitat values is not addressed under the VMA.

In relation to biosecurity, the *Biosecurity Act 2014 (Qld)* (the **Biosecurity Act**) imposes a 'general biosecurity obligation' on all Queenslanders to manage biosecurity risks that are under their control and that they know about or could reasonably be expected to know about.¹⁹ In practical terms, this means that:

- If you are a livestock owner, you are expected to stay informed about pests and diseases that could affect or be carried by your animals, as well as weeds and pest animals that could be on your property. You are also expected to manage them appropriately.
- If you are a landowner, you are expected to stay informed about the weeds and pest animals (such as wild dogs) that could be on your property. You are also expected to manage them appropriately.

The Biosecurity Act assigns the pests identified in the offset areas as Restricted Matters in Categories 3-6 and requires the following management as shown below in *Table 9*.

Table 9: Biosecurity Act 2014 (Qld) obligations

Category	What is required	Examples
3	Must not distribute, be traded or released into the environment	Most invasive weeds, pest animals, noxious fish
4	Must not move	Certain weeds, pest animals, noxious fish such as feral pigs, feral deer, rabbits, Hudson pear and jumping cholla cactus
5	Must not possess or keep	Rabbits, carp, bunny ears cactus
6	Must not feed (except if undertaking a control program)	Feral deer, wild dogs, rabbits, foxes, noxious fish (tilapia, gambusia)

The obligations in the OMP are additional to these general obligations, in that control is required once thresholds as detailed in *Table 8* are met, which initiates the respective controlling actions. For example, there is a requirement to control wild pigs if numbers in excess of 12 are observed in any one property inspection; this is above and beyond the requirements of the Biosecurity Act, as is the reduction of weed species to 10% of the offset area over the life of the management plan.

¹⁸ *Vegetation Management Act 1999* (Schedule definitions)

¹⁹ See <https://www.daf.qld.gov.au/business-priorities/biosecurity/policy-legislation-regulation/biosecurity-act-2014/general-biosecurity-obligation>

The Woorabinda Aboriginal Shire Council identifies the offset area as Rural in their planning scheme and offers no protection from the current ongoing land use. The council does not have a Biosecurity Plan and only refers to the Biosecurity Act.

11 Monitoring and reporting

The monitoring and reporting methods (*Table 10*) will enable comparative changes in vegetation condition against baseline data collected on the offset site, as well as attainment and maintenance of the offset completion criteria (*Table 5*). Furthermore, the reporting will measure changes resulting from the management actions and variability due to climatic conditions. This will inform the nature and frequency of management actions required.

Sunwater will prepare a compliance report for each 12-month period following the date of the commencement of the action for the period of the approval. Annual Reports on the progress of the offset achieving the outcomes as required in this Offset Management Plan will be part of those reports until the outcomes of the management plan are achieved or the end of the EPBC approval (i.e., until 1st of October 2052), whichever comes first.

A report must be prepared by a suitably qualified person by 1 October 2052 that provides evidence that the entire offset area has attained and maintained the completion criteria.

The monitoring schedule is outlined in *Table 10*. The reporting schedule is provided in *Table 11*.

The reports scheduled in *Table 11* will be published on the Sunwater website, within 6 months of the date required.

Table 10: Monitoring schedule

Monitoring	Attributes monitored	Timing	Method	Location/s
Surveys undertaken by suitably qualified ecologists every 5 years				
Ecological condition and relevant habitat features	Recruitment of woody perennial species in EDL		Field observations, vegetation assessment as per the <i>Guide to determining terrestrial habitat quality – a toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy (version 1.3 February 2020)</i> (DEHP, 2020). Data for each of the ecological condition attributes monitored will be collected at each site listed in <i>Table 12</i> and reported on and presented in a sequential manner (including previous data collected) to quantify change from the baseline condition determined November 2019. This will record the change in each attribute measured and hence the condition of the ecological community and habitat, thus enabling a statistical comparison to previous years' data and	Site listed in <i>Table 12</i> and shown in <i>Figure 6</i> .
	Native plant species richness – trees			
	Native plant species richness – shrubs	2026 2031 2036		
	Native plant species richness – grasses	2041 2046 2051 (if required)		
	Native plant species richness – forbs	Undertaken during the period of March – May		
	Tree canopy height			
	Tree canopy cover			
	Shrub canopy cover			

Monitoring	Attributes monitored	Timing	Method	Location/s
	Native perennial grass cover		attainment of the offset completion criteria.	
	Organic litter			
	Large trees			
	Coarse woody debris			
	Non-native plant cover			
	Quality and availability of food and foraging habitat			
	Quality and availability of shelter			
Quarterly Landholder/Authority Holder Records and monitoring (end of Sept, Dec, Mar, Jun).				
Forestry operations, native timber harvesting and general vegetation impacts	Any incidence of native plant destruction		General observations	Within offset areas
Unauthorised impacts to vegetation and woody debris from activities such as illegal harvesting, illegal access/camping	Vegetation, woody debris, grass cover, weed cover, feral animal damage and presence	Monitored quarterly and reported annually until completion criteria achieved.	Landholder or person appointed by the Landholder will undertake quarterly inspections of the offset area to observe and record grass cover levels, weeds, accessibility (i.e. condition of fencing), and evidence of fire, erosion, and feral animal incursion. The inspection records will serve as the primary data source for the Offset Area Report.	Within offset areas
Grazing	Cattle stocking rates, cattle numbers in and out of the offset area	Monitored monthly during grazing periods and reported annually until completion criteria achieved	Dry Matter yield is to be assessed using the https://futurebeef.com.au/knowledge-centre/pasture-photo-standards/	Within offset areas
	Grass Dry Matter yield			
	Pugging			
Fire	Occurrence, control measures implemented, timing and result of the control measures as per <i>Table 8</i> .	Monitored quarterly and reported annually until completion criteria achieved.		

Monitoring	Attributes monitored	Timing	Method	Location/s
Invasive plants/ Weeds	Occurrence, control measures implemented, timing and the result of the control measures as per <i>Table 8</i> .		Weed cover is to be monitored by the same methodology and at the same time as the grass cover measurements. in accordance with Level 1 monitoring as per the <i>Land Manager's Monitoring Guide</i> (DERM, 2010)	
Feral animals	Occurrence, control measures implemented, timing and the result of the control measures as per <i>Table 8</i> .		Quarterly inspections will involve traversing the offset area with streams, low lying areas and vehicle access tracks being noted, to record the presence of wallow holes, tracks and visual incidents in the offset area. If detected, these locations will be GPS-recorded and photographed and rechecked at the next quarterly inspection.	

The Landholder or suitable qualified person appointed by the Landholder will undertake quarterly inspections of the offset area to observe and record dry matter yield levels, pest plants, accessibility (i.e. condition of fencing), evidence of fire and evidence of pest animal incursion. The inspection records will serve as the primary data source for the annual Offset Area Report.

Grass and weed cover monitoring are to be undertaken as per the Level 1 methodology described in the *Land Manager's Monitoring Guide* (DERM, 2010).

Table 11: Reporting schedule

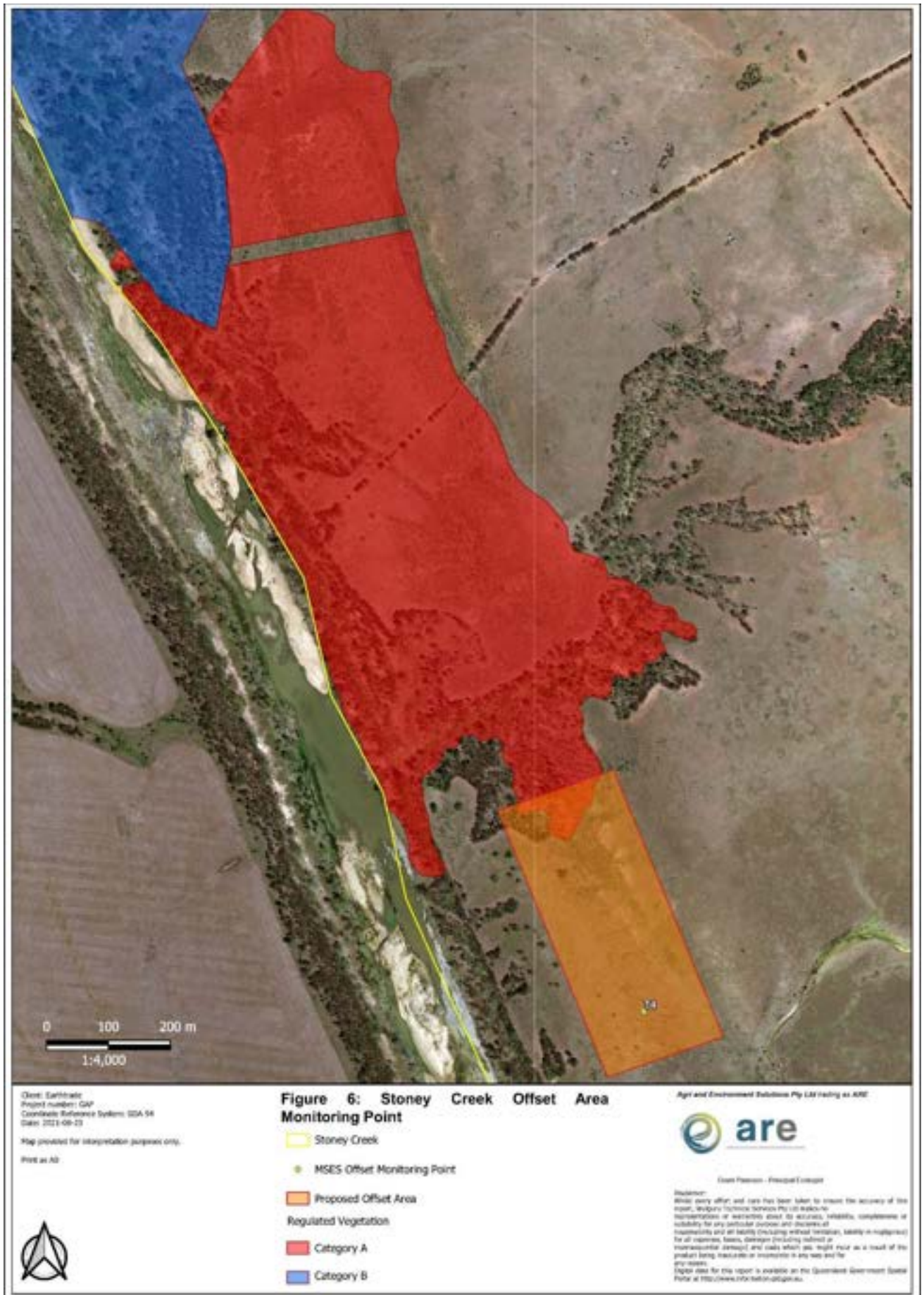
Report Details to DAWE	Reporting period	Submission due date
Offset Area Report detailing photo point and management actions and offset condition outcomes achieved for preceding reporting period. Note: the reports and results from detailed ecology survey and monitoring events conducted in accordance with <i>Table 10</i> will be provided as an appendix to the subsequent Annual Offset Area Report.	From the date of approval of this OMP until the completion criteria achieved or June 2051, whichever comes first. 1 May – 30 May annually	30 June for first three years then every 5 years until completion criteria achieved or 2051 (whichever comes first). 2022 2023 2024 2029 2034 2039 2044 2049 2051

Table 12: Monitoring sites

Biocondition assessment number	Regional ecosystem	EPBC Status	Location - longitude	Location - latitude
T4	11.3.3	Endangered	-23.564091	149.740268
T4.1 (to be established in May 2022)			-23.56185	149.73892

Coordinates system: GDA_1994_MGA_Zone_55

Figure 6: Monitoring points



12 Legally binding mechanism

This offset will be secured via a voluntary declaration as an area of high conservation value under the VMA. Once this has been registered on the title, the offset area will be mapped as a category A area on the property map of assessable vegetation (**PMAV**). An area mapped as category A on a PMAV is described as an 'area subject to compliance notices, offsets and voluntary declarations'.

Once approved under the EPBC Act, the OMP will be attached to the VDec, which is required to be registered within 6 months from the approval of this OMP. Management and monitoring of the offset area will be undertaken in accordance with commitments in the approved OMP.

The VDec will remain in place as the legally securing mechanism for the offset area. The VDec and approved OMP will ensure the offset completion criteria are attained, and then maintained for the period of the EPBC Act approval (i.e. until October 2052). Statutory protection of the offset area is maintained under the VM Act and EPBC Act (or subsequent legislation).

13 Prior authorisation and continuing use exemption

Sections 43A and 43B of the EPBC Act exempt certain actions from the assessment and approval provisions of the EPBC Act. They apply to lawful continuations of land use that started before 16 July 2000 or actions that were legally authorised before 16 July 2000, the date of commencement of the EPBC Act. The exemptions allow for the continuation of activities that were fully approved by state and local governments before the EPBC Act came into force ('prior authorisation'), or otherwise lawful activities, which commenced before the EPBC Act came into force, and which have continued without substantial interruption ('continuing uses'). For Stoney Creek, the offset area would be able to be continued to be cleared, burnt and heavily grazed and/or cultivated, thereby preventing the TEC from recovering. The long-term management of the site is depicted in *Plates 1 – 6*.

Continuing use

Under the continuing use exemption, assessment and approval under the EPBC Act is not required if:

- the action commenced before 16 July 2000;
- the use of land, sea or seabed was lawful; and
- the action has continued in the same location without enlargement, expansion or intensification.

Plate 1: Aerial imagery of the offset site, dated 1952



Plate 2: Aerial imagery of the offset site, dated 1963



Plate 3: Aerial imagery of the offset site, dated 1973



Plate 4: Aerial imagery of the offset site, dated 1981



Plate 5: Aerial imagery of the offset site, dated 1998



Plate 6: Aerial imagery of the offset site, dated 1999



List of abbreviations

Abbreviation	Description
ARE	Agri & Environmental Solutions Pty Ltd
BVG	Broad vegetation group
CSG	Coal seam gas
DAWE	Department of Agriculture, Water and the Environment
DES	Department of Environment and Science (Qld)
DNRME	Department of Natural Resources, Mines and Energy (Qld) (former)
DSEWPAC	Department of Sustainability, Environment, Water, Population and Communities (Commonwealth) (former)
EA	Environmental authority
EOP	Environmental Offsets Policy (October 2012) (EPBC Act)
EPBC Act	Environment Protection & Biodiversity Conservation Act 1999 (Cth)
ha	hectares
HQS	Habitat quality scoring
MNES	Matters of national environmental significance
MSES	Matters of state environmental significance
OAG	Offset Assessment Guideline (DoEE)
OIA	Offset Investigation Area
OMP	Offset Management Plan
PMAV	Property map of assessable vegetation
RE	Regional ecosystem
Sunwater	Sunwater Limited
TEC	Threatened ecological community
VDec	Voluntary declaration
VMA	Vegetation Management Act 1999 (Qld)

Glossary

Term	Definition
Category A vegetation	<p>Under Queensland vegetation management legislation, Category A vegetation is an area which is:</p> <ul style="list-style-type: none"> • a declared area • an offset area, an exchange area, an area that has been subject to unlawful clearing or an enforcement notice, an area subject to clearing as a result of a clearing offence OR • an area that the chief executive determines to be Category A <p>Category A areas are colour-coded red on the regulated vegetation management map.</p> <p>See <i>Vegetation Management Act 1999</i>, s20AL.</p>
Category X vegetation	<p>Under Queensland vegetation management legislation, all areas other than Category A, B, C and R areas are Category X areas. Some Category X areas are also identified on a property map of assessable vegetation (PMAV) as 'locked in'. Category X areas are also known as 'exempt areas' because activity in Category X areas is not regulated by the <i>Vegetation Management Act 1999</i>. Category X areas are colour-coded white on the regulated vegetation management map (see <i>Vegetation Management Act 1999</i> (Qld) s 20A.).</p>
Habitat quality scores	<p>A score out of ten, based on biocondition assessment plus an assessment of habitat quality.</p> <p>A method of evaluating habitat quality within a particular community based on key indicators including site condition, site context and species habitat index (if necessary). The method produces a score out of 10, where the maximum score of 10 represents a fully intact system. Scores of 4, 5 and 6 may indicate good quality regrowth or medium value habitat.</p>
Offset Investigation Area	<p>Area of land that was assessed for ecological values, within which an offset area could be selected, based on required values</p>
Offset calculator	<p>The <i>Offset Assessment Guide</i> spreadsheet tool as provided by DAWE</p>
Property map of assessable vegetation	<p>A map certified by the chief-executive as a PMAV for an area and showing the vegetation category areas for the area (e.g. Category C area, Category X area)</p> <p>See <i>Vegetation Management Act 1999</i> (Qld), section 20AK.</p>
Regrowth vegetation	<p>Vegetation that is not remnant vegetation.</p>
Regulated vegetation	<p>Vegetation that:</p> <ul style="list-style-type: none"> • is an endangered regional ecosystem, an of concern regional ecosystem, or a least concern regional ecosystem, and • forms the predominant canopy of the vegetation covering more than 50% of the undisturbed predominant capacity; averaging more than 70% of the vegetation's undisturbed height; and composed of species characteristic of the vegetation's undisturbed predominant canopy.

Schedule 1: Title search – ‘Stoney Creek’



Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	30618240	Search Date:	08/07/2021 10:46
Date Title Created:	22/07/1992	Request No:	37799988
Creating Dealing:			

ESTATE AND LAND

Estate in Fee Simple

LOT 2 CROWN PLAN LR37
Local Government: CENTRAL HIGHLANDS

REGISTERED OWNER

WOORABINDA PASTORAL COMPANY PTY LIMITED

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 30618240 (Lot 2 on CP LR37)
2. EASEMENT IN GROSS No 712049062 14/11/2008 at 15:42 burdening the land CENTRAL QUEENSLAND PIPELINE PTY LTD A.B.N. 55 126 648 815 over EASEMENT A ON SP209912
3. MORTGAGE No 718084704 14/06/2017 at 12:35 NATIONAL AUSTRALIA BANK LIMITED A.B.N. 12 004 044 937
4. EASEMENT IN GROSS No 720868296 17/06/2021 at 07:49 burdening the land SUNWATER LIMITED A.C.N. 131 034 985 over THE WHOLE OF THE WITHIN LAND

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
711269772	VEG NOTICE VEGETATION MANAGEMENT ACT 1999	13/12/2007 11:32	CURRENT
716921236	VEG NOTICE VEGETATION MANAGEMENT ACT 1999	30/11/2015 12:29	CURRENT

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Schedule 2: Offset Assessment Guide output

Offsets Assessment Guide

For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 1999
2 October 2017

Matter of National Environmental Significance	
Name	Coolibah TEC
EPBC Act status	Valuable
Annual probability of extinction <small>Based on IUCN category definitions</small>	0.2%

Impact calculator					
Ecological communities					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area (Hectares)	1.38	
			Quality (Scale 0-10)	7	
			Total quantum of impact (Adjusted Hectares)		0.97
Threatened species habitat					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes	Koolia habitat	Area (Hectares)		
			Quality (Scale 0-10)		
			Total quantum of impact (Adjusted Hectares)		0.00
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Number of features <small>e.g. Nest hollows, habitat trees</small>	No				
Condition of habitat <small>Change in habitat condition, but no change in extent</small>	No				
Threatened species					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Birth rate <small>e.g. Change in nest success</small>	No				
Mortality rate <small>e.g. Change in number of road kills per year</small>	No				
Number of individuals <small>e.g. Individual plants/animals</small>	No				

Offset calculator																				
Ecological Communities																				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizon (Years)	Start area and quality		Future area and quality without offset (adjusted hectares)		Future area and quality with offset (adjusted hectares)		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offset Result		Cost (\$ total)	Information source		
					Risk-related time horizon (max. 20 years)	Start area (hectares)	Risk of loss without offset (%)	Risk of loss with offset (%)	Risk of loss without offset (%)	Risk of loss with offset (%)					Overall net present value	% of impact offset				
Area of community	Yes	0.97	RE 11.3.3 on Lot 2 LR6	20	10	0%	0%	5%	5%	-0.50	90%	-0.45	-0.43	Overall net present value	4.60					
				20	3	1	1	7	7	6.00	85%	5.10	4.90	% of impact offset	475.94%					
												Future area without offset	10.0	Future area with offset	9.5	Minimum (90%) direct offset requirement met?		TRUE		
Threatened species habitat																				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizon (Years)	Start area and quality		Future area and quality without offset (adjusted hectares)		Future area and quality with offset (adjusted hectares)		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offset Result		Cost (\$ total)	Information source		
Area of habitat	Yes	0.00	AU15-47.9ha, AU7-12.2	20	220	20%	0%	0%	0%	44.00					100%	44.00			42.28	Overall net present value
				20	5	5	5	7	7	2.00	85%	1.70	1.53	% of impact offset	0.00%					
												Future area without offset	176.0	Future area with offset	179.8	Minimum (90%) direct offset requirement met?		FALSE		
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizon (years)	Start Value	Future value without offset	Future value with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source					
Number of features <small>e.g. Nest hollows, habitat trees</small>	No							0.00		0.00	0.00	0.00%	FALSE							
Condition of habitat <small>Change in habitat condition, but no change in extent</small>	No							0.00		0.00	0.00	0.00%	FALSE							
Threatened species																				
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizon (years)	Start Value	Future value without offset	Future value with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source					
Birth rate <small>e.g. Change in nest success</small>	No							0.00		0.00	0.00	0.00%	FALSE							
Mortality rate <small>e.g. Change in number of road kills per year</small>	No							0.00		0.00	0.00	0.00%	FALSE							
Number of individuals <small>e.g. Individual plants/animals</small>	No							0.00		0.00	0.00	0.00%	FALSE							

Summary							
Protected matter attributes	Quantum of impact	Net present value	% of impact offset	Direct offset adequate?	Cost (\$)		
					Direct offset	Other compensatory measures	Total
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat	0.00	58.34	0.00	FALSE	0.00	N/A	0.00
Area of community	0.97	4.60	4.76	TRUE	0.00	N/A	0.00
					\$0.00	\$0.00	\$0.00

Schedule 3: Request for declared area



Department of Resources
ABN 59 020 847 551

Request for a declared area

as 12E-15C, Vegetation Management Act 1999

Use this form to request an area of land to be declared an area of high nature conservation value or an area vulnerable to land degradation. For guidance on declared areas see the [Guide to declared areas \(hyperlink\)](#).

To apply for an area to be legally secured as an exchange area, complete the [application to legally secure an exchange area](#). For guidance on legally securing an exchange area see the [General guide to accepted development vegetation clearing codes](#).

1. Owner's (applicant's) details

Owner, of land includes -

- (a) for freehold land - all registered owners; or
- (b) for a lease, license or permit under the Land Act 1994 - all lessees, licensees or permittees; or
- (c) for indigenous land - the holder of title to the land; or
- (d) for any tenure under any other Act - the holder of the tenure.

First name: Middle name: Surname:

Company name:

If a corporation then enter one of the following: ACN ABN ARBN

Main phone: Other phone:

Email:

Address line 1:

Address line 2:

Town/Suburb: State: Postcode:

Preferred method of contact: Phone Email Letter

The nominated contact person does not need to be the owner. All verbal and written correspondence (including the issue of notices) will be sent to the nominated contact person.

Name of nominated contact person (if applicable):

Company name:

If a corporation then enter one of the following: ACN ABN ARBN

Main phone: Other phone:

Email address:

Address line 1:

Address line 2:

Town/Suburb: State: Postcode:

Preferred method of contact: Phone Email Letter

I accept that I will act as the nominated contact person on behalf of the owner(s) referred to in Section 1.

Signature of nominated contact person:

Date:

2. Property description

This is the property on which the declared area is proposed. The declared area management plan should indicate the specific location of the proposed declared area on the property.
 Extra pages may be attached to list additional lots.

Lot number	Plan number	Area in hectares	Tenure
2	LR37	4,876	Freehold

3. Registered interest holder consent

A registered interest is one registered under the *Land Act 1994* or the *Land Title Act 1994*.

Registered interests include but are not limited to mortgages, leases, subleases, covenants, profit a prendres, easements and building management statements.

A declaration may not be made unless the holder of a registered interest (other than the owner) in the proposed declaration area has consented in writing to the making of the declaration.

Note: Registered interest holder consent is not required to lodge this request for a declared area but is required prior to the making of a declaration.

Acknowledgement and waiver by all registered interest holders.
READ BEFORE SIGNING THIS SECTION

- By signing this section, those signing are taken to:
- acknowledge that a declaration resulting from this request may have legal and financial implications for your interest in the property, and you agree that in no event shall the Department of Resources be liable for any special, indirect or consequential damages or any damages whatsoever rising out of or in connection with this request or any subsequent declaration in accordance with this request.
 - consent to the making of a declaration as proposed in this request and supporting material.

Extra pages may be attached to list additional lots and/or registered interest holders and provide their consent to the making of the declaration.

Parcel (Lot & plan)	Type of registered interest	Registered interest holder's name	Contact details	Signature
Lot 2 LR 37	Easement 712049162	Central Qld Pipeline Pty Ltd		
Lot 2 LR 37	Mortgage 718084704	National Australia Bank Ltd	Ph: 13 10 12	
Lot 2 LR 37	Easement 720868296	Sunwater Limited	Ph: 07 3210 0335	

4. Type of declaration	
Specify the type of declaration that is requested, and the relevant criteria for the declaration. One or more of the criteria may be applicable to the area being sought for declaration.	
Note: The owner must provide an explanation of how the declared area meets the criteria selected in this section. This explanation must be provided in the documents accompanying the request.	
<input checked="" type="radio"/> Area of high nature conservation value <input type="checkbox"/> A wildlife refugium <input type="checkbox"/> A centre of endemism <input type="checkbox"/> An area containing a vegetation clump or corridor that contributes to the maintenance of biodiversity <input checked="" type="checkbox"/> An area that makes a significant contribution to the conservation of biodiversity <input type="checkbox"/> An area that contributes to the conservation value of a wetland, lake or spring <input type="checkbox"/> Another area that contributes to the conservation of the environment OR	
<input type="radio"/> An area vulnerable to land degradation <input type="checkbox"/> Soil erosion <input type="checkbox"/> Rising water tables <input type="checkbox"/> The expression of salinity, whether inside or outside the area <input type="checkbox"/> Mass movement by gravity of soil or rock <input type="checkbox"/> Stream bank instability <input type="checkbox"/> A process that results in declining water quality	
4.1 Purpose of request	
<input type="radio"/> Vegetation Management Environmental Offset	<input type="radio"/> Better Environmental Outcome (BEO)
<input type="radio"/> Environmental Offset (Queensland)	<input type="radio"/> Other Conservation Purpose
<input checked="" type="radio"/> Environmental Offset (Commonwealth)	<input type="radio"/> Enforceable Undertaking
<input type="radio"/> Carbon Offset	
Note: if the purpose of the declaration is to legally secure an exchange area, complete the application to legally secure an exchange area	
4.2 Associated development approval	
If the declaration is linked to a development approval under the Planning Act (for example, if it required to meet a project condition to legally secure an offset area), please provide details of the development approval below:	
Development approval reference number:	<input type="text"/>
If the declaration is linked to an approval under another Act please provide details of the approval below:	
Other Approval reference number:	<input type="text" value="EPBC Act Approval 2009/5173"/>
Responsible agency:	<input type="text" value="Department of Agriculture, Water and Environment"/>
5. Management plan	
A management plan must be provided with this request for a declared area. The management plan must contain all the components identified in this section. The management plan is to refer to the area identified in Section 2 of this form. The management plan may also include any other information the applicant considers will assist in the determination of the request.	
For more information on the management plan, consult the Guide to declared areas, available on www.cdd.gov.au	

Management plan checklist

- Property owner's contact details and signature
- Includes description of the area subject to the declared area
- Includes map showing the location and extent of the declared area (or enough information for chief executive to map the stated area):
 - A map that defines the boundaries of the proposed declared area and a description of the boundaries of the area referenced by Map Grid of Australia 2020 (MGA2020) coordinates and zone references for the area
 - A map showing the proposed declared area with five or more GPS points that correspond to identifiable fixed features; and the Map Grid of Australia 2020 (MGA2020) coordinates and zone references for each point, acquired by GPS or similar system of satellites that receives and processing information; and a description of the feature that each point represents
 - A dataset, which can be used in a Geographic Information System showing the proposed declared area
- States the owner's management intent, and management outcomes proposed by the owner, for the conservation of the high nature conservation value of the area or the prevention of land degradation in the area
- States the activities the owner intends to carry out, or refrain from carrying out, to achieve the stated management outcomes
- States the restrictions, if any, to be imposed on the use of, or access to, the area by other persons to achieve the stated management outcomes
- If the declared area is to legally secure an environmental offset and the Department of Resources is not the administering agency, includes confirmation that the administering agency has / has not approved the declared area management plan that complies with the VMA

A declared area management plan template / guidance is available at www.qld.gov.au

6. Signature of owner (applicant) and all registered owners

Where the owner is a company, execution by the company must be provided in accordance with the requirements of the **Corporations Act 2001 (Commonwealth)** section 127.

A company:

- may execute a document without using a common seal if the document is signed by two (2) directors of the company or a director and a company secretary, or for a proprietary company that has a sole director who is also the sole company secretary - that director; or
- with a company seal may execute a document if the seal is fixed to the document and the fixing of the seal is witnessed by two (2) directors of the company or a director and a company secretary; or for a proprietary company that has a sole director who is also the sole company secretary - that director.

READ BEFORE SIGNING THIS SECTION

Acknowledgement and waiver by the owner (applicant) and all registered owners.

Before consent to or lodging this request for a declared area, it is recommended that all registered owners of the property seek their own independent legal and financial advice regarding the effect of this request, and the legal and financial impacts of any subsequent declaration.

By signing this section, those signing are taken to:

- acknowledge that the declared area resulting from this request may have legal and financial implications for your interest in the property, and you agree that in no event shall the Department of Resources be liable for any damages whatsoever rising out of or in connection with this request or any subsequent declaration; and
- consent to the lodgment of the request; and
- agree that all information entered and provided in this request, including any maps, lists or other documents additionally supplied, is correct and accurate; and
- authorise the nominated contact person to act as such on your behalf; and
- authorise all verbal correspondence relating to this request to be to the nominated contact person; and
- authorise all written correspondence (including the issuing of notices) relating to this request to be sent to the postal address for the nominated contact person; and
- request that the chief executive agree to make a declaration as proposed in this request.

If there are more owners, extra pages containing the additional signature(s) may be attached.

Lot	Plan number	Owner's name	If a corporation record one of the following:		Owner's signature	Date	Company seal (if applicable)
2	LR37	Woorabinda Pastoral	<input checked="" type="radio"/> ACN	<input type="radio"/> ARBN	011 072 450		
		Company Pty Ltd	<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			
			<input type="radio"/> ACN	<input type="radio"/> ARBN			

Privacy statement: The Department of Resources is collecting the information in this form and any attachments to process your request that the chief executive declare a stated area of land under the *Vegetation Management Act 1999*. The consideration of your request may involve consultation, and if so, details of your request and any attachments may be disclosed to third parties. These details will not otherwise be disclosed outside the Department of Resources unless required or authorized by law.

Office use only			
Name:	<input type="text"/>	Position:	<input type="text"/>
Signature	<input type="text"/>	Date:	<input type="text"/>
		Date received	<input type="text"/>

Declared area management plan

Vegetation Management Act 1999

Complete the following management plan for an area to be declared as an area of high nature conservation value or an area vulnerable to land degradation.

For guidance on declared areas see the [Guide to declared areas \(hyperlink\)](#). For guidance on legally securing an exchange area see the [General guide to accepted development vegetation clearing codes](#).

Note: Examples of information to include in this management plan are intended as guidance only. The level of detail or scope of the management plan will depend on the purpose of the declaration and the particular circumstances of the area being secured.

1. Owner's details

First name:		Middle name:		Surname:	
Company name:	WOORABINDA PASTORAL COMPANY PTY LTD				
If a corporation then enter one of the following:				<input checked="" type="radio"/> ACN <input type="radio"/> ABN <input type="radio"/> ARBN	011 072 450
Main phone:		Other phone:			
Address line 1:	c/o Woorabinda Aboriginal Shire Council				
Address line 2:	Munns Drive				
Town/Suburb:	Woorabinda	State:	QLD	Postcode:	4713
Email address:	woorabinda.manager@wpcoffice.com				
Preferred method of contact				<input type="radio"/> Phone <input type="radio"/> Email <input checked="" type="radio"/> Letter	
Local government area:	Central Highlands Regional Council				
<i>Office use only:</i>					
eLVAS case number:					
Notification number:					

2. Property description

This is the property on which the declared area is proposed. The declared area management plan should indicate the specific location of the proposed declared area on the property.
 Extra pages may be attached to list additional lots.

Lot number	Plan number	Declared area in hectares	Tenure
2	LR37		Freehold

3. Description of declared area

Include enough information to allow the chief executive to map the boundary of the stated area, including a description of the area subject to the declared area and a map showing the location and extent of the area.

Refer to Section 5 of the document titled "SunwaterLtd: Woleebee Creek to Glebe Weir Pipeline Project EPBC 2011/6181 Offset Management Plan" (OMP)

A map may be attached to this plan and submitted with the request for a declared area. Please provide spatial data in the format of a .kml or .shp file of your proposed area so that the exact extent can be used for the assessment.

4. Purpose of the declaration

The purpose of this declaration is to conserve an area of:

- high nature conservation value
- vulnerable to land degradation

under section 19G(1)(b)(iii) of the *Vegetation Management Act 1999* (VMA)

5. Registered interest holders consent

A registered interest is one registered under the *Land Act 1994* or the *Land Title Act 1994*.

Registered interests include mortgages, leases, subleases, covenants, profit a prendres, easements and building management statements.

A declaration may not be made unless the holder of a registered interest (other than the owner) in the proposed declaration area has consented in writing to the making of the declaration.

READ BEFORE SIGNING THIS SECTION

Acknowledgement and waiver by all registered interest holders.

By signing this section, those signing are taken to:

- acknowledge that a declared area resulting from a request for a declared area may have legal and financial implications for your interest in the property, and you agree that in no event shall the Department of Resources be liable for any special, indirect or consequential damages or any damages whatsoever rising out of or in connection with a request for a declared area or any subsequent declaration of the area in accordance with the request for a declared area.
- consent to the making of a declared area as proposed in the request for a declared area.

Extra pages may be attached to list additional lots and/or registered interest holders and provide their consent to the making of the declaration

Parcel (Lot & plan)	Type of registered interest	Registered interest holder's name	Contact details	Signature
Lot 2 LR 37	Easement 712049162	Central Qld Pipeline Pty Ltd		
Lot 2 LR37	Mortgage 718054704	National Australia Bank Ltd	Ph: 13 10 12	
Lot 2 LR37	Easement 720868296	Sunwater Limited	Ph: 07 3210 0335	

Principles for drafting management plan: *In the sections below you will need to outline how you will achieve the management outcomes, including details on what actions will be taken to achieve this and how you will mitigate any impacts and manage any potential risks that may hinder the specified outcome.*

6. Management intent

Refer to Section 7 and Section 9 of the OMP.

Examples:

1. *The management intent for the area is the conservation of the native vegetation in the area. Conservation of the native vegetation will prevent the loss of biodiversity and maintain ecological processes.*
2. *The management intent for an area vulnerable to land degradation is to rehabilitate a degraded, unstable watercourse in an area subject to stream bank instability.*

7. Management outcome

Refer to Section 7 and Section 9 of the OMP.

Principles for drafting management outcomes: *The management outcomes for the area should be achievable, measurable and related to the to the conservation value or land degradation issue associated with the area.*

Examples:

1. *The management outcome for the area is that it achieves the definition of remnant vegetation.*
2. *The management outcome for the area is to establish (insert number) habitat trees and to have restored and enhanced (insert hectares) of natural area within (insert number) of years.*

Note for exchange areas: If the declaration is to legally secure an exchange area, the management objective must be either of the following:

- i. If the exchange area is located in a category X area, category C area or category R area—to return the exchange area to remnant vegetation (a category B area on the regulated vegetation management map) as soon as possible and within 20 years
- ii. If the exchange area is located in a category B area—to achieve the nominated substantial conservation outcome or address the nominated significant land degradation issue as soon as possible

8. Activities and restrictions

Refer to Section 9 of the OMP.

Example: To achieve the management outcome, the landholder will comply with the following activities and restrictions:

1. *Clearing of native vegetation will not occur unless in accordance with an exemption listed in Schedule 21 of the Planning Regulation 2017 or a development approval under the Planning Act 2016.*
2. *All reasonable measures will be taken to maintain and enhance the structure and function of the regional ecosystem. For example, minimizing the introduction, establishment and spread of non-native plants. Where non-native plants already occur in the area, all reasonable measures will be taken to control the non-native plants.*
3. *Burning will only occur in accordance with the fire guideline/s specified in the Regional ecosystem description database (available at www.qld.gov.au) for the regional ecosystem/s in the declared area.*
4. *Pest animals and pest plants considered an invasive biosecurity matter under the Biosecurity Act 2014 will be controlled.*
5. *Livestock will be managed to ensure the growth of native vegetation and biodiversity is not impeded.*

Note for exchange areas: If the declaration is to legally secure an exchange area, this section of the management plan must include:

- Description of the works / management actions that will be undertaken to achieve the management objective, including the methods, timing, frequency, intended benefits etc.
- The conservation outcomes that will be achieved by the works / management actions
- Description of the management actions that will be undertaken to ensure that the effects of the works do not result in land degradation
- Details of who is responsible for all works and management actions, and the estimated length of time the area/s will be managed

9. Term

A management plan for a declared area has effect until the earlier of the following happens:

- the plan ends under its terms; or
- the declaration of the area as a declared area ends under section 19L of the VMA

Refer to Section 7 of the OMP.

Ending a declaration

Under section 19L of the VMA the chief executive may, by written notice given to the owner of the land the subject of a declaration, end the declaration if the chief executive considers:

- the declaration is not in the interests of the State, having regard to the public interest; or
- the management outcomes mentioned in section 19E(3)(c) of the VMA for the management plan relevant to the declaration have been achieved.

The chief executive may, by notice given to the owner of land declared as an area of high conservation value, end the declaration if:

- the area is, on or after the commencement of subsection 19L(2) of the VMA, a legally secured offset area; and
- a prescribed activity is, under an authority under another Act, to be carried out in or on the area; and
- the holder of the authority has entered into an agreed delivery arrangement in relation to an environmental offset for impacts to the area.

Note: If the landholder considers the management outcomes have been achieved, they may submit a request to end a declaration to the Department of Resources. The Department of Resources will assess whether the management outcomes have been met before removing the declaration. If the declaration is to legally secure an environmental offset and the Department of Resources is not the administering agency, the department should also be satisfied that the administering agency agrees the management outcomes have been met and agrees to the ending of the declaration in order for the department to end the declaration.

Once the declaration has ended this plan will cease to have effect and the department will remove the declaration notice from the title of the land. The landholder should submit a 20C PMAV application with the request to remove the declaration to replace the PMAV currently over the declared area and map the appropriate category of vegetation for the area (for example, category B).

10. Monitoring and record keeping

Refer to Section 11 of the OMP.

Monitoring and record keeping should be undertaken to track the state of the declared area and progress towards achieving the management outcomes specified in this plan. The following information should also be provided:

- Monitoring and auditing processes including adaptive management approaches to rectify negative results from the monitoring and auditing processes
- Record keeping process for retaining appropriate records for monitoring and auditing processes.

Note: Providing the information above complies with the ADVCC requirements for legally securing an exchange area.

To apply for an area to be legally secured as an exchange area, complete the [application to legally secure an exchange area](#). For guidance on legally securing an exchange area see the [General guide to accepted development vegetation clearing codes](#).

11. Additional information

The management plan may also include any other information the applicant considers will assist in the determination of the request. Additional information can be provided below or as an attachment to this plan.

Refer to OMP.

12. Administering agency approval

If you are using a declared area to legally secure an environmental offset and the Department of Resources is not the administering agency, has the administering agency approved this management plan?

- Yes – Please include a copy of this approval with the request
- No – Please provide contact information for the administering agency and details of the offset delivery progress

Note: this management plan complies with the requirements for a declared area under the VMA, it does not fulfil the requirements of an offset management plan.

13. Signature of owner (applicant) and all registered owners

If there is more than one owner of the land on which the declared area is proposed, each owner must complete and sign this management plan. The owner of the land is the party/s registered on title as the registered owner.

Where the owner is a company, execution by the company must be provided in accordance with the requirements of the *Corporations Act 2001 (Commonwealth)*, section 127.

A company:

- may execute a document without using a common seal if the document is signed by two (2) directors of the company or a director and a company secretary; or for a proprietary company that has a sole director who is also the sole company secretary - that director; or
- with a company seal may execute a document if the seal is fixed to the document and the fixing of the seal is witnessed by two (2) directors of the company or a director and a company secretary; or for a proprietary company that has a sole director who is also the sole company secretary - that director.

If there are more owners, extra pages containing the additional signature(s) may be attached.

Lot	Plan number	Owner's name	If a corporation record one of the following:	Owner's signature	Date	Company seal (if applicable)
2	LR37	Woorabinda Pastoral	<input checked="" type="radio"/> ACN <input type="radio"/> ARBN	011 072 450		
		Company Pty Ltd	<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
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			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			
			<input type="radio"/> ACN <input type="radio"/> ARBN			

Department of Resources (office use only)

Name		Position		Signature		Date	
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Schedule 4: EPBC Approval Notice



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Approval

Woleebee Creek to Glebe Weir Pipeline Project, Queensland (EPBC 2011/6181)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted SunWater Limited

proponent's ACN 131 034 985

proposed action To construct and operate a pipeline for the transportation and use of up to 113 ML/day of treated coal seam gas water from Woleebee Creek to Glebe Weir in Queensland [See EPBC Act referral 2011/6181].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approve
National Heritage places (sections 15B & 15C)	Approve
Listed threatened species and communities (sections 18 & 18A)	Approve
Great Barrier Reef Marine Park (sections 24B & 24C)	Approve

conditions of approval

The approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 1 October 2052.

Decision-maker

name and position



signature



date of decision

27-09-12

PROPOSED Conditions attached to the approval

1. The person taking the action must undertake the action in accordance with the Preliminary Documentation dated 2 August 2012, and the conditions of this approval. The conditions of this approval prevail to the extent of any inconsistencies.
2. Within 20 business days after the commencement of the action, the person taking the action must advise the department in writing of the actual date of commencement of the action.
3. The person taking the action must prepare a Construction Environmental Management Plan (CEMP). The CEMP must be submitted to, and approved by the department prior to commencement of the action. The CEMP must be implemented. The approved CEMP must include, but should not be limited to, the following:
 - a. measures to minimise impacts to EPBC Act listed threatened fauna species, including measures to care for injured fauna;
 - b. measures to minimise impacts to EPBC Act listed threatened flora, including a vegetation clearing strategy;
 - c. measures to limit the spread of pests and invasive species;
 - d. sediment and erosion controls;
 - e. measures to revegetate and rehabilitate the subject site following construction; and
 - f. measures to implement, monitor, or improve (should deficiencies be identified, either by the person taking the action or by the department) the CEMP.
4. The person taking the action must not destroy by clearing or any other activity, more than 2.08 ha of the endangered ecological community "Brigalow (*Acacia harpophylla*) dominant and co-dominant," nor more than 1.38 ha of the endangered ecological community "Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions."
 - a. If clearing of more than 2.08 ha of the endangered ecological community "Brigalow (*Acacia harpophylla*) dominant and co-dominant," or more than 1.38 ha of the endangered ecological community "Coolibah – Black Box Woodlands of the

Darling Riverine Plains and the Brigalow Belt South Bioregions* is necessary, the person taking the action must:

- i. undertake pre-clearance surveys of additional areas to be cleared; and
 - ii. submit the pre-clearance surveys to the **department** for approval, prior to clearing.
 - b. Any approved clearing of vegetation must be conducted in accordance with the CEMP, required by Condition 3.
5. The person taking the action must not destroy by clearing or any other activity, more than 22 ha of natural habitat suitable for the vulnerable species: Large-eared Pied-bat (*Chalinolobus dwyeri*); Southern-eastern Long-eared Bat (*Nyctophilus corbeni*); and Brigalow Scaly-foot (*Parademi orientalis*).
 - a. If more than 22 ha of natural habitat suitable for the vulnerable species: Large-eared Pied-bat (*Chalinolobus dwyeri*); Southern-eastern Long-eared Bat (*Nyctophilus corbeni*); and Brigalow Scaly-foot (*Parademi orientalis*) is necessary, the person taking the action must:
 - i. undertake pre-clearance surveys of additional areas to be cleared; and
 - ii. submit the pre-clearance surveys to the **department** for approval, prior to clearing.
 - b. Any approved clearing of vegetation must be conducted in accordance with the CEMP, required by Condition 3.
6. The person taking the action must develop a Biodiversity Offset Strategy (BOS) to ensure better protection of EPBC Act listed threatened species and communities. The BOS must be submitted to, and approved by the **Minister** prior to commencement of the action.
 - a. The BOS must be developed in accordance with the **EPBC Act Environmental Offset Policy**.
 - b. The BOS must include, but should not be limited to, the following:
 - i. details of the acquisition and ongoing management of vegetation which meets or will meet the definition of the endangered ecological community "Brigalow (*Acacia harpophylla*) dominant and co-dominant";
 - ii. details of the acquisition and ongoing management of vegetation which meets or will meet the definition of the endangered ecological community "Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions";
 - iii. details of steps to be undertaken to **legally secure** the proposed offset areas and implement to BOS within 12 months of the commencement of the action.
 - iv. The offset areas for each separate community must be contiguous (that is, the total cannot be composed of a number of fragments), and must not be located within an existing mining lease or mining lease application areas; and
 - v. Upon legally securing the offset area, the BOS must be updated with a textual description and map to clearly define the location and boundaries of

the offset area. This must be accompanied with the **offset attributes** and a **shapefile**.

7. The person taking the action must prepare a Discharge Management Plan (DMP). The DMP must be submitted to, and approved by the **department** prior to commencement of **discharge**. The DMP must include, but should not be limited to, the following:
 - a. measures to ensure a volume of water equivalent to the volume of **discharged Coal Seam Gas water** is extracted from the Dawson River prior to the end of the **Dawson Valley Water Supply Scheme** area; and
 - b. measures to monitor usage of said volume, including measures to deal with inappropriate usage.
8. The person taking the action must conduct **regular** environmental monitoring within the Dawson River:
 - a. at a range of locations including, but not limited to:
 - i. upstream of the discharge point;
 - ii. within Glebe Weir, but downstream of the discharge point; and
 - iii. downstream of Glebe Weir, at least as far as Theodore Weir.
 - b. The indicators to be included within the monitoring program should align with those in Table 2 (Aquatic Ecosystem values) of the "Dawson River Sub-basin Environmental Values and Water Quality Objectives" as listed in Schedule 1 of the Environmental Protection (Water) Policy (Qld) as they relate to the potential stressors or relevant impacts identified in the Preliminary Documentation.
 - c. The objectives for comparison should be those referenced in the Schedule, or if no objectives are stated for indicators that are relevant to the discharge (as identified in the Preliminary Documentation), to the Queensland Water Quality Guidelines or Australian Water Quality Guidelines, as appropriate.
 - d. Within three months of every six month anniversary of commencement of **discharge** (and until 2 years after cessation of **discharge**), the person taking the action must submit to the **department** an Environmental Performance Report (EPR). The EPR must include, but not be limited to, the following:
 - i. the results of implementation of the DMP;
 - ii. the results of the **regular** environmental monitoring required by this condition;
 - iii. an **independent evaluation** of the results of the **regular** environmental monitoring required by this condition, and an assessment of any new or increased likely impacts to the environment; and
 - iv. details of **appropriate actions** taken/to be taken in the event that any new or increased likely impacts to the environment are identified.
 - e. If, upon review of an EPR, the **department** is not satisfied that **appropriate actions** have been taken or will be taken to mitigate any new or increased likely impacts to the environment identified during the regular monitoring required by this condition, the **department** may direct the person taking the action to reduce or cease discharge. The person taking the action must then undertake an evaluation in

accordance with the recommendations of an independent evaluator and submit the report to the **department** for approval.

9. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the **department**. Such records may be subject to audit by the **department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of the approval. Summaries or audits will be posted on the **department's** website. The results of audits may also be publicised through the general media.
10. Within three months of every 12 month anniversary of the **commencement of the action**, the person taking the action must publish a Compliance Report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **department** at the same time as the compliance report.
 - a. From first submission of the EPR described in Condition 8, the second of those reports submitted each year can also serve as the Compliance Report required by this condition, as long as the requirements of both conditions are met.
11. If the person taking the action wishes to carry out any activity otherwise than in accordance with the management plans/strategy as specified in the conditions, the person taking the action must submit to the **department** for the **Minister's** written approval, a revised version of that management plan/strategy. The varied activity shall not commence until the **Minister** has approved the varied management plan/strategy in writing. The **Minister** will not approve a varied management plan/strategy unless the revised management plan/strategy would result in an equivalent or improved environmental outcome over time. If the **Minister** approved the revised management plan/strategy that management plan/strategy must be implemented in place of the management plan originally approved.
12. If the **Minister** believes that it is necessary or convenient for the better protection of World Heritage properties (sections 12 and 15A), National Heritage places (sections 15B and 15C), Listed Threatened Species and Communities (sections 18 and 18A), or the Great Barrier Reef Marine Park (section 24B and 24C) to do so, the **Minister** may request that the person taking the action make specified revisions to the management plan/s/strategy specified in the conditions and submit the revised management plan/s/strategy for the **Minister's** written approval. The person taking the action must comply with any such request. The revised approved management plan/strategy must be implemented. Unless the **Minister** has approved the revised management plan/strategy, then the person taking the action must continue to implement the management plan/strategy originally approved, as specified in the conditions.
13. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish all management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within one month of being approved.

Definitions

- a) **Appropriate actions** – Actions which result in the total rectification of the identified water quality issue (i.e. actions that return the quality of the water to a pre-issue standard).
- b) **Brigalow (*Acacia harpophylla*) dominant and co-dominant** – As defined in the *Commonwealth Listing Advice on Brigalow (Acacia harpophylla dominant and co-dominant)*.
- c) **Commencement of the action** – Includes any preparatory work required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure.
- d) **Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions** - As defined in the *Commonwealth Listing Advice on Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions*
- e) **Dawson Valley Water Supply Scheme** – The 338 km stretch of the Dawson River from the upstream limit of Glebe Weir to the downstream limit of the Boolburra waterhole.
- f) **Department** – The Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.
- g) **Discharge** – The act of discharging treated Coal Seam Gas water into the Glebe Weir on the Dawson River, Queensland.
- h) **Discharged Coal Seam Gas water** – All treated Coal Seam Gas water that travels through the proposed pipeline and is discharged into the Glebe Weir on the Dawson River, Queensland.
- i) **End** – The end of the **Dawson Valley Water Supply Scheme** is the downstream limit of the Boolburra waterhole on the Dawson River.
- j) **EPBC Act Environmental Offset Policy** – The *EPBC Act Environmental Offsets Policy – Consultation Draft*, and the *Environmental Offsets Assessment Guide*.
- k) **Independent evaluation** – Must be conducted by a suitably qualified professional, external to SunWater Limited.
- l) **Legally secured** – The use of legally binding mechanisms such as a covenant, voluntary declaration, nature refuge or other such means as may be approved in writing by the **Minister** to secure all offset areas identified in the Biodiversity Offset Strategy.
- m) **Minister** – The Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.
- n) **Offset attributes** – An '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.
- o) **Regular** – A minimum of once per month for the first 12 months of operation. Then a minimum of once every three months for the remainder of the operational life of the project.
- p) **Shapefile** – An ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format.

Appendix 1: Terrestrial Ecology Reports

Appendix 1.1: Impact assessment

Woleebee Creek to Glebe Weir Pipeline, Vegetation Offset Strategy, Version 7, SKM, 11 January 2013.

Please see file supplied separately

Appendix 1.2: Offset assessment

Offset Suitability Assessment, Foley Vale and Stoney Creek, ARE 2019

Please see file supplied separately

Appendix 2: Contributing authors and CVs

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<p>Current industry position</p>	<p>[Redacted]</p>
<p>Qualifications</p>	<p>[Redacted]</p>
<p>Professional Association Memberships</p>	<p>[Redacted]</p>
<p>Professional Recognition, Registrations, Licences, Certifications.</p>	<p>[Redacted]</p>
<p>Key achievements</p>	<p>[Redacted]</p>